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FIFTH ANNUAL REPORT

OF THE

STATE BOARD OF HEALTH

OF

ILLINOIS.

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SPRINGFIELD, ILLINOIS.  
H. W. ROKKER, STATE PRINTER AND BINDER.  
1883.



ILLINOIS STATE BOARD OF HEALTH.

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OFFICE OF THE SECRETARY,

SPRINGFIELD, ILL., January, 1883.

*To His Excellency, SHELBY M. CULLOM, Governor:*

SIR: In conformity with the Twelfth Section of the Act to Create and Establish a BOARD OF HEALTH in the State of Illinois, approved May 25, 1877, I have the honor to submit to you the accompanying Report for the year 1882.

Very respectfully,

JOHN H. RAUCH, M. D.,

*Secretary.*

## MEMBERS OF THE BOARD.

---

JOHN M. GREGORY, LL. D., Champaign, *President*.

JOHN McLEAN, M. D., Pullman.

NEWTON BATEMAN, LL. D., Galesburg.

R. LUDLAM, M. D., Chicago.

A. L. CLARK, M. D., Elgin, *Treasurer*.

W. A. HASKELL, M. D., Alton.

JOHN H. RAUCH, M. D., Chicago, *Secretary*.

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F. W. REILLY, M. D., Chicago, *Assistant Secretary*.

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## SUMMARY REPORT OF THE BOARD.

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*To His Excellency, SHELBY M. CULLOM, Governor:*

SIR: A considerable portion of the Fifth Annual Report of the STATE BOARD OF HEALTH has been in type for some months; but various causes have combined to delay its publication until the present time. Among these was the necessity for condensing the vast mass of data, collected by the Secretary, concerning the Small-Pox Epidemic of 1880-82, and concerning Vaccination in Illinois—two related subjects which have occupied a large share of the attention of the BOARD since the winter of 1880-81. To have published this information as at first proposed, with details and tables *in extenso* for each county, would have swollen the volume far beyond any admissible limit. Some 400 octavo pages of tabular statements and abstracts concerning the vaccination of school-children alone—of which specimens are given on pages 387-390, inclusive, would have been necessary to give what has finally been condensed into about 60 pages, in much more accessible form. An immense amount of work has thus been done in the preparation, not only of these 60 pages, but of much other matter, and which work does not show in the completed volume, but the extent of which may be inferred from this illustration.

It is hoped, however, that some amend is made for this delay in the character of the Report now presented. So far as the BOARD is aware, no epidemic in this country has been so widely and intelligently observed, and so faithfully recorded, as the Small-Pox Epidemic of 1880-82 in Illinois. Nearly 500 individuals, embracing attending physicians, and municipal, town and county officers, have contributed, each in his proper capacity, to the information furnished as to the introduction of the contagion, its mode and extent of propagation, the measures resorted to for its suppression and their result, the cost, actual and constructive, and other noteworthy features. In like manner, the vaccinal history of 304,586 public-school children—based upon physicians' certificates of vaccination—has been furnished by over 8,000 teachers; 493 physicians have reported the results in 187,223 vaccinations at all ages; and the vaccinal status of 18,708 inmates of public institutions, private and parochial schools, colleges, academies, etc., has also been given—making an aggregate of 510,517 individual vaccinations and revaccinations, concerning which the details of results with different kinds of virus,

at given ages and in each sex; of the individual experience of vaccinating physicians; of the relative merits of humanized and of bovine virus; of noteworthy complications and results; of vaccinal and post-vaccinal erysipelas, and alleged disasters; and other matters of interest, are given in something over one hundred pages of the Appendix.

Small-pox invaded 77 out of the 102 counties of the State during its epidemic prevalence, causing an aggregate of 8,856 cases and 2,978 deaths, and involving a cost of nearly four and a half millions of dollars, exclusive of the value of human life lost and the disabled condition of many of the survivors. As early as March, 1881, when the disease had appeared at less than half a dozen points in the State outside of Chicago, the BOARD issued its first circular, calling attention to the indications of a wide-spread epidemic, and urging the necessity of vaccination and revaccination as the only means of security. Little heed was paid to this first warning, and the fact that only seven new localities were infected during July, August and September, still further diminished its effect. Study of the situation, however, and past experience confirmed the view first taken; and in November of that year the BOARD issued an order providing for the vaccination of all public-school children before the 1st of January, 1882, and supplemented this by efforts to secure the vaccinal protection of different classes of the community, through circulars, orders and instructions, addressed to State, county, township and municipal authorities, corporation officers, superintendents, managers and other employers. These efforts were finally attended with such success that, on the 24th of January, 1882, the Secretary was able to say, "I doubt if the people of any other State of equal age are as well protected against small-pox as those of Illinois at the present time";\* and the degree of vaccinal protection thus secured, (mainly within sixty days), coupled with a general familiarity with the BOARD's instructions as to the methods of dealing with an outbreak, warranted the prediction then made, to-wit: That the epidemic, although more widely spread than at any previous time, was practically under control. As a matter of history it is now known that this was the culminating point of the epidemic, and within twenty days after the various agencies set in operation by the BOARD had fairly begun to act, there was a decline of nearly 59 per cent. in the number of cases, whereas the average reduction, from the highest point reached in other epidemics for 32 years previous, had been only a little over 15 per cent. As is elsewhere shown, this implies a constructive saving of 320 lives, 1,517 cases, and over two and three-quarter millions of dollars.†

In the hundred and fifty-odd pages devoted to this subject, will be found a succinct history of the inception and progress of the epidemic in Illinois; the measures employed for its suppression; the details of local outbreaks; and the lessons taught by a study of the vast mass of facts and figures contributed by numerous observers in all parts of the State. Forming a portion of this section of the Report is a paper demonstrating the connection of unpro-

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\* See summary of the situation, pages 213-214 of Appendix.

† See Cost of the Epidemic, pages 218-220, *ibid*.



tested immigrants with the origin and continuance of small-pox epidemics; and urging the sanitary surveillance of immigrant travel from the port of arrival to the point of ultimate destination; such surveillance to consist of repeated inspections, vaccination of the unprotected, systematic observation of suspicious sickness, prompt isolation of discovered small-pox or other contagious disease, and enforcement of the necessary measures to prevent its further spread—the system to be under the control of, and the expense to be borne by, the National Government.

From June to December, 1882, such a system was in operation in the area of country between the Canadian frontier and the port of Baltimore, and extending westward to the Mississippi river. It was inaugurated by the National Board of Health, as a result of the Small-Pox Conference, held in Chicago in June, 1881, at the instance of this Board; and the Secretary of the Board acted as Supervising Inspector of the Western District, embracing the States of Indiana, Illinois and Missouri. An aggregate of 115,057 immigrants, arriving in the District during the seven months, were inspected, and 21,618 were here vaccinated or revaccinated, in addition to 28,498 vaccinated or revaccinated by the Eastern inspectors. In other words, 47 per cent. of all immigrants landed in this country during the year 1882—and the vast majority direct from small-pox localities in Europe—were susceptible to the disease, capable of conveying the contagion into the communities among which they might settle, and of becoming its victims themselves. Including Chicago, there had been 57 separate importations of small-pox into Illinois by immigrants during the seven months preceding the inauguration of this Service. With one solitary exception, early in June, there was no further immigrant introduction of the disease into the State during the succeeding seven months—although many cases were discovered in transit and removed from the trains direct to hospital, in every instance without further spread of the disease. The same results were obtained throughout the rest of the Northwest, only one other outbreak from immigrants being reported—namely, in Minnesota—during the month of August.

Want of means compelled the National Board to order the service discontinued on the 15th of December; but, in the hope that Congress would make the necessary appropriation for its further maintenance, the inspectors were induced to remain on duty until the close of the year. Congress has, however, failed to make any provision for such a system in the future, notwithstanding its demonstrated value. The Secretary of this Board visited Washington twice in the interest of the Service, and appeared before the House and Senate committees to explain its details and benefits, not only to Illinois and the Northwest, but to the entire country; urging that its operation, or some equivalent, was indispensable to the exclusion of imported contagion in the absence of a uniform administration of maritime and boundary quarantines. Alike in the prevention of the spread of yellow fever or Asiatic cholera from one State to another, as in the exclusion of small-pox, an authority independent of State lines, but co-operating with, and aiding State and local health organizations is essential to the perfection of the sanitary defense of the Nation. A summary of his argument is given

in the report of the proceedings of the Sanitary Council of the Mississippi Valley, pages 526-28 of the Appendix. The BOARD has formally memorialized Congress to the same effect, and has sought to interest the Illinois Senators and Representatives in the matter, feeling assured that, whatever the specific agency employed—whether the National Board of Health, or the medical departments of the Government—the only adequate authority is the National authority, as the only proper support is the National Treasury. This BOARD is firmly convinced that, sooner or later, the United States Government must not only assume plenary control of exterior quarantine, but also provide for a permanent system of co-operation with State and local governments in the administration of inter-State quarantine in order, on the one hand, to prevent the introduction of exotic epidemic diseases—small-pox, yellow fever and cholera—and, on the other, to prevent their spread from State to State, along the great intra-national highways of travel and commerce.

DURING the year the usual quarterly meetings have been held, the January and October meetings in Springfield, and the April and July meetings in Chicago. Owing to the pressure of details connected with the small-pox epidemic, the January meeting was adjourned, after a prolonged session, on the 19th, at Springfield, to Chicago, where a two days' session was held in March. At the April meeting the annual examination of non-graduate candidates for licenses to practice was held, resulting in the passing of six out of a class of sixteen. The schedule of questions submitted at this examination will be found in the abstract of proceedings of the April meeting.

While conforming to the letter of the law, which prescribes that examinations shall be of an elementary and practical character, the spirit of the entire act is believed to be fulfilled by exacting, from year to year, a stricter test of the candidate's qualifications as a practitioner. Hence, it will be found, by comparing this schedule with those of earlier years, that a higher standard of qualifications is now deemed necessary to obtain a certificate. This accords with the improvement in medical education generally, and is simple justice to the medical colleges and the public. It is not conceived by the BOARD that the provisions of the Medical-Practice Act, whereby non-graduates may obtain licenses or certificates, were intended to furnish a cheap and easy entrance to the practice of medicine in the State; nor to deprive the public of the attainments and qualifications which are best acquired by attendance upon the full curriculum of study at a properly-equipped college, with the necessary clinical facilities for hospital and dispensary practice. In accordance with this view, the successful candidates at the BOARD examinations of recent years would have been awarded diplomas at any medical college in the country, with, probably, only two or three exceptions. As a matter of fact, the great majority of those who obtain certificates by examination subsequently do graduate from some reputable college, in accordance with the recommendation of the BOARD; and from this, among other causes, the proportion of non-graduates to graduates in Illinois has been reversed since the passage of the Act; so that now, instead of there being an excess

of the former over the latter, the proportion is less than one non-graduate to five graduates—a reduction of from 3,800 non-graduates at the time when the law went into effect, to about 650 at the close of 1882.

The BOARD has recommended, not only to its licentiates upon examination, but also to non-graduate practitioners exempt by the ten years' prior-practice clause, that they attend lectures and procure diplomas from legally-chartered medical institutions in good standing, if for no other reason than that there is an increasing demand by the public for the higher qualifications of such institutions in applicants for places of public trust and profit, as well as in general practice.

CERTIFICATES, authorizing the practice of medicine and surgery in Illinois, have been issued to 473 physicians during the year, being 57 less than in the preceding year. Of these 450 were based upon diplomas of reputable medical colleges; 17 upon length of practice in the State prior to the passage of the Medical-Practice Act; and 6 upon result of examination.

Licenses to practice midwifery have been issued to 62 midwives; 36 based upon certificates, diplomas or licenses (mainly foreign); 13 on term of practice in the State; and 13 after examination by the BOARD.

There have been, in all, 7,034 certificates to physicians, and 732 licenses to midwives—or a total of 7,766 certificates and licenses issued since the organization of the BOARD in July, 1877.

Applications for physician's certificates were refused in 143 cases during the year, for some one of the following causes: Presenting diplomas of institutions not recognized by the BOARD as in good standing; unsatisfactory personal or professional antecedents, habits or associations, warranting the charge of unprofessional and dishonorable conduct; intent to practice in an unprofessional and dishonorable manner—as by claiming to cure incurable maladies, to possess unusual skill, experience or facilities, and similar claims involving deceit and fraud upon the public.

One certificate was revoked on evidence that it had been fraudulently obtained upon a stolen diploma;\* and three others on proved charges of unprofessional and dishonorable conduct. One certificate, previously revoked by the BOARD, was restored upon receiving guarantee of intention to refrain from the objectionable practices which had caused its revocation.

A number of charges against practitioners (43 during the year) have been investigated by the full BOARD: but, in the majority of instances, these cases are satisfactorily disposed of by the Secretary without being pushed to a formal investigation. Reports, verbal or written, are made of such cases to the BOARD at its meetings; but, unless some important interest is to be subserved, no publicity is given to them. Generally, a letter calling attention to the offense charged is sufficient to secure its correction or abandonment of the

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\* See Henry A. Luder's case, page xl.



practice; but in several of the graver cases the parties have voluntarily removed from the State rather than appear before the BOARD, and so have avoided the penalty of revocation of certificate, with consequent loss of professional status in Illinois. It is, as yet, a mooted question whether the BOARD is empowered to revoke its certificate in these cases, in order to prevent, so far as may be, the use of this *prima facie* evidence of professional standing to the detriment of other communities. In some flagrant instances the BOARD has, however, assumed this responsibility.

THE belief expressed in the last annual report of the BOARD—that its action in formulating a definition of the phrase, “medical institutions in good standing,” might be profitable in improving the general average of medical instruction in this country—is confirmed by the experience of the past year. Although compliance with the standard of minimum requirements, adopted by the BOARD as the basis for recognition, will not be exacted until after the current session of 1882-3, quite a number of colleges in various parts of the country have already conformed their courses of study, and conditions of matriculation and graduation, to this standard.

The essential features of the BOARD's schedule are—1.) Such a general preliminary education of the intending student, before his admission to the lecture-room (matriculation qualification), as will enable him to comprehend the instruction therein given. 2.) Such a curriculum of study, as to branches taught, duration of reading- and of lecture-terms, and practical clinical instruction, as obtains in the average medical school. The BOARD has not felt warranted in exacting the highest existing standard, nor, indeed, in making the standard adopted as high as it is believed it should be, and as it is hoped eventually to see medical education in this country. Toward this higher standard, however, this action is one step; and the preliminary-education requirement must be the foundation for all else.

Opposition may naturally be expected from two classes of schools, to-wit—Colleges which are maintained, primarily, as money-making investments for the stock-holders, *i. e.*, the members of the faculty; and colleges which, by reason of their location or otherwise, are unable to command the necessary number and quality of instructors, adequate hospital and clinical facilities, and proper equipment. With the first class, the diminished number of students, and consequent shrinkage in receipts, which will for a time follow the exaction of the preliminary-education qualification, will, no doubt, cause this movement to be regarded with disfavor; while the second class will object to anything which tends to increase the difficulties of their struggle for existence. The public, however, and the profession who have no pecuniary interest in medical education as a business, will, no doubt, agree with the better class of medical colleges, that the quality of medical practitioners is of, at least, as much moment as the number.

The Summary of Medical Colleges and Students (pp. 162-189) shows that there is an annual average of over 12,000 students in attendance, and that more than 4,000 of these are graduated each year from the 130 medical institutions in the United States and Canada. With 1 in every 4,250 of the population studying medicine,



and 1 in every 600 practicing medicine, there is no imminent danger of a dearth of medical men, even though classes become smaller and schools less numerous for a time. The survival of the fittest will amply compensate for the loss of the totally unfit, which latter, both among schools and men, are the ones who will be affected by the Standard of Minimum Requirements.

ADVANCE sheets of the section in the Appendix, entitled Medical Education and the Regulation of the Practice of Medicine in the United States and Canada, have been sent out to the various colleges for revision and addition; and the supplementary matter thus obtained (see pages 193-202, inclusive,) brings this information, practically, up to the date of publication. Some notable changes will be found on comparing this section with that on the same subject in the Fourth Annual Report. In this latter volume it is stated that only fifteen States have enacted laws regulating the practice of medicine within their borders. The laws pertaining to this subject in the present report are collated from thirty-seven States and Territories, and four from the Dominion of Canada.

Similarly, with respect to the requirements and provisions of medical colleges. In 1881 there were only 17 colleges requiring attendance on three courses of lectures before graduation: now there are 27, and 56 others recommend and provide for three courses, but without absolutely requiring attendance on more than two. There are now 82 colleges which enact the preliminary-education requirement as a pre-requisite to matriculation, as against only 45 last year. Sanitary science and preventive medicine are now taught in 64 schools, instead of only 48 last year. These, and other indications, serve to show that there is a substantial advance in the system of medical education in this country, since the BOARD announced its Schedule of Minimum Requirements necessary for the recognition of a medical college in Illinois. The Directory of Medical Institutions, published in the last annual report, and this section on Medical Education, make it possible to institute a series of very interesting comparisons in this regard.

OF the office work of the BOARD, in connection with the issue of certificates and licenses, there were 1086 letters written and mailed, in addition to the necessary printed matter prepared and distributed, and blank forms (affidavits and certificates) filled up; and 3620 various documents—including 527 diplomas submitted for verification—were received, examined and returned or filed.

Pertaining to other subjects—mainly in connection with medical education and purely sanitary matters—there were mailed 6259 letters and other communications, and 10,434 letters, reports and other communications were received, a large share of these being with reference to the small-pox epidemic and the vaccination of school-children. In addition to the letters, circulars, postals, &c., written and mailed, there were distributed by mail and express, very nearly one million copies of printed matter of various kinds, including about 800,000 Scholar's Certificates of Vaccination, and Official Registers, Annual Reports, Reports of Immigrant Inspections, Quarterly Reports, Small-Pox and Vaccination Rules and Regulations, blanks for Returns of Vaccination, of Small-Pox Cases and Cost, of Vital Statistics, Burial Permits, etc.

Out of the total available resources of the BOARD for the fiscal year ended September 30, 1882,—amounting to \$11,270.51\*—there was expended the sum of \$9,141.87, leaving an unexpended balance of \$1907.73 in the State Treasury, and of \$220.91 in the hands of the Treasurer of the BOARD. An itemized statement of expenditures is given on page xliii, from which it will be seen that \$3105.42 was drawn from the contingent epidemic fund, for extraordinary expenses incurred in connection with the Small-Pox Epidemic. Of the regular appropriation, \$5,500 there was expended \$5,436.85, and from fees and other receipts—which amounted to \$598—there was expended \$449.60, the difference between these last two sums, \$48.40 added to an unexpended balance of \$172.51 in the hands of the Treasurer October 1, 1881, making the unexpended balance of \$220.91 in his hands at the close of the fiscal year, as above stated.

WITH renewed expressions of appreciation of the value of your counsel, and of your interest in the labors of the BOARD, we are, Sir,

Very respectfully,

JOHN M. GREGORY,  
JOHN McLEAN,  
NEWTON BATEMAN,  
R. LUDLAM,  
A. L. CLARK,  
W. A. HASKELL,  
JOHN H. RAUCH.

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\*This sum is mis-printed \$11,270.81 on page xliii, instead of \$11,270.51, which is the correct amount, as shown by the items composing the sum.

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ABSTRACT  
OF THE  
PROCEEDINGS OF THE ILLINOIS STATE BOARD OF HEALTH,  
AT ITS  
MEETINGS DURING THE YEAR 1882.

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A B S T R A C T  
OF THE  
PROCEEDINGS OF THE ILLINOIS STATE BOARD OF HEALTH  
AT ITS  
MEETINGS DURING THE YEAR 1882.

At the regular annual meeting of the ILLINOIS STATE BOARD OF HEALTH, held in Springfield, January 19, 1882, the following members were present: Drs. Gregory, Bateman, McLean, Haskell and Rauch—the President, Dr. Gregory, in the chair.

The minutes of the previous meeting were read and approved.

On motion of Dr. Bateman, the reception of the annual reports of the officers was deferred to a subsequent meeting.

*Revision of By-Laws:*

On motion of the Secretary a committee was appointed to revise the By-Laws, and, at the suggestion of Dr. Bateman, the President was authorized to appoint said committee, which he subsequently did, naming Drs. Bateman, McLean and Haskell.

*The School-Vaccination Order:*

On motion of the Secretary, the rules were suspended in order to take up the subjects of small-pox and school-vaccination. During the discussion which ensued, the propriety and necessity of extending the period for the enforcement of the vaccination order were considered at length; but, without arriving at any conclusion, this matter was postponed to the evening session.

At this session (which was attended by the same members), after reading a large number of letters from the Secretary's correspondence bearing upon the subject, Dr. Bateman, who had been requested to formulate propositions concerning the extension of the vaccination order to private schools, and the liability of school directors and others in the enforcement of said order, offered the following resolution, which was unanimously adopted:

*Resolved*, That the power of the STATE BOARD OF HEALTH, under the law creating said BOARD, to order the vaccination of all public school children, is clear and unquestionable. The consequent duty of boards of school directors to see that that order is strictly enforced in their respective districts, is equally clear, and the said order of the STATE BOARD OF HEALTH is their sufficient warrant for so doing.

Should any board of directors refuse or neglect to carry out said order, they may be proceeded against for neglect of duty; and should any such board be prosecuted for enforcing said order, they may, if necessary, employ counsel to defend them in such suit, and pay said counsel out of any school funds of their district not otherwise specifically appropriated.

The protection of the public health from the loathsome and deadly scourge of small-pox, is a paramount obligation, and nothing can or should or will excuse school boards or other officers or persons concerned, from doing their whole duty in the premises.

After discussion, the question of extending the vaccination order to private schools, academies and colleges, was relegated to the Secretary, with authority to so extend if, in his judgment, it became necessary to take such action.

The revision of Official Order No. 53—Concerning the Prevention of Small-Pox—was approved.

### *Vaccination of Rivermen:*

The Secretary presented copies of correspondence with the surgeon-general of the marine hospital service, concerning the gratuitous vaccination of rivermen.

On motion of Dr. Haskell, the Secretary was instructed to cause publication of the arrangement to be made, and to advise steamboat owners and managers to require proper evidence of recent vaccination as a condition precedent to employment on their boats, from and after February 1st, *prox*.

In this connection the Secretary stated that the following circular-letter had already been addressed to the superintendents and other officers of all the leading steamboat lines on the Ohio and Mississippi rivers:

ILLINOIS STATE BOARD OF HEALTH, OFFICE OF THE SECRETARY  
SPRINGFIELD, January 9, 1882.

DEAR SIR—Small-pox has already been introduced (within the past six weeks) into thirteen of the eighteen Mississippi river counties of Illinois, as well as into the United States marine hospital, at Cairo. In some instances the introduction is positively known to have been due to "roustabouts," or other hands from steamboats; and in others it is strongly suspected to have been by the same means. Under these circumstances, it becomes my duty to advise you that unless those employed on steamboats are properly protected by recent vaccination (or otherwise), it may become necessary to enforce quarantine restrictions at all the river towns of this State.

It is earnestly hoped that such a measure may not have to be resorted to; but its avoidance rests altogether in the hands of officers of steamboat lines and their immediate subordinates. An order from such officers requiring the prompt vaccination of all those permanently employed on their boats would be the first and most important step.

I have already written to the supervising surgeon-general of the marine-hospital service, asking what provision can be made for the gratuitous vaccination of hospital-tax paying river-men; and have no doubt that he will make the necessary arrangements to that end.

When this is done, I would suggest that you supplement the requirement above indicated by another, directing that, within a reasonable time after vaccination is thus made gratuitous, no "rouster" or deck-hand be employed on your boats who does not present a certificate of recent vaccination (or other protection) from a marine-hospital surgeon.

Nothing impracticable or onerous is asked or expected; but it is so entirely feasible to eliminate this mode of spreading small-pox—i. e., by unprotected steamboatmen and employes; and the dangers to be averted, as well as the benefits to be derived, are so numerous and so obvious, that your cordial co-operation is confidently anticipated.

In acknowledging the receipt of this, I will thank you for any suggestions or advice you may have to offer on the subject.

Very respectfully,

JOHN H. RAUCH, M. D., *Secretary*.



Responses had already been received from the majority of those addressed, and there was no doubt of the hearty co-operation of this interest in the efforts of the BOARD to prevent further spread of the disease.

### *Pure Vaccine Virus :*

On motion of Dr. McLean, the following resolution was adopted :

*Resolved*, That the ILLINOIS STATE BOARD OF HEALTH warmly approves the proposition of the Hon. D. C. Smith, M. C., to provide, under National authority, a supply of pure vaccine virus—that being, in the judgment of this BOARD, the most efficient means of securing to the people safety in vaccination; and the Secretary is hereby instructed to transmit a copy of this resolution to the author of House Bill No. 2231, "For the distribution of pure vaccine virus to the people," with an expression of the earnest hope of the BOARD that said bill may speedily become law.

### *National Control of Quarantine :*

The Secretary offered the following preamble and resolutions, which were also adopted :

WHEREAS, Quarantine measures for the prevention of the introduction of epidemic contagious or infectious diseases from foreign countries into the United States are matters of National concern, affecting not only the seaboard and gulf States (where, necessarily, such measures must be enforced,) but also and equally those of the interior—as evidenced most recently by the wide diffusion of imported small-pox; therefore, be it

*Resolved*, That, in the judgment of this BOARD, such quarantine measures should be under the direct control of the National government; the necessary rules and regulations formulated by a National organization; and their execution intrusted to officers clothed with National authority.

*Resolved*, That the Senators and Representatives of this State be, and they hereby are, respectfully and earnestly requested to use their influence toward securing the necessary legislation to this end.

Copies of both the foregoing, duly attested and signed by the President and Secretary, were directed to be sent to each of the Illinois Senators and Representatives in Congress.

### *Vaccination of Inmates of State and other Institutions :*

The publication of the following official order, addressed, January 10, 1882, to those in charge of State institutions and other public officers, was formally approved :

WHEREAS, It having come to the knowledge of this BOARD that many of those in attendance at State educational institutions, as also many of the inmates of charitable, reformatory and penal establishments, are not protected against Small-Pox by recent vaccination (or otherwise); and,

WHEREAS, Students, in at least one instance, and the "tramp" element in very many cases, have proven a prolific means of spreading the contagion: Therefore, it is hereby

*Ordered*, That all persons in attendance at State universities, colleges and schools; and all inmates of asylums, alms-houses, jails, and kindred institutions, be forthwith vaccinated (or revaccinated, as the case may be), with as little delay as possible; provided, that the following classes shall be exempt from the operation of this Order, to-wit:

*First*—All persons who have been successfully vaccinated since October 1, 1881.

*Second*—All others in whom vaccination is pronounced, by the proper medical authority, unnecessary by reason of previous attacks of small-pox. The evidence of this must be unmistakable; and varioloid shall not be held to exempt, unless "pitting" or cicatrices be visible upon the person.

*Third*—All those to whom, in the judgment of the proper medical authority, the operation would be injurious by reason of existing disease, or other conditions.

Presiding and executive officers of educational institutions; county commissioners; boards of supervisors; city authorities; town and village trustees; superintendents; and all other officers having charge or control of the institutions above described, are hereby requested to see to the prompt enforcement of this order; and to cause to be made, on or before the 28th day of February, 1882, a report thereof upon the blank forms prepared by this BOARD. An adequate supply of said forms for report will be furnished on application to the Secretary—in which application the number of persons to be accounted for should be stated.

This Order is issued under the authority conferred upon the STATE BOARD OF HEALTH by act of the General Assembly, approved May 25, 1877.

*Secretary's Quarterly Report :*

On resuming the regular order of business, the Secretary presented his quarterly report, which was mainly devoted to matters pertaining to the spread of small-pox and the efforts being made to suppress it. Since November 9, 1881, there had been written, and mailed from this office, 1546 letters and postal cards pertaining to the small-pox epidemic, vaccination of school children, and kindred matters. Eight different circulars, certificates, returns, etc.,—aggregating between 550,000 and 600,000 copies—had been prepared, printed and distributed. In addition to this, there had been also several hundred hektographed circular-letters prepared, and mailed to railroad and steamboat officers, employers, managers, superintendents, boards of health and others.

The report was accepted, and ordered placed on file; Drs. Haskell and McLean were appointed as auditing committee for the ensuing year; the quarterly accounts were audited, other usual routine business was transacted, and, at 11:15 p. m., the BOARD adjourned to meet in Chicago, March 2, 1882.



# ADJOURNED MEETING,

MARCH 23, 1882.

PURSUANT to adjournment, a special meeting of the BOARD was held at the Grand Pacific hotel, Chicago, on March 2d and 3d, 1882, for the purpose of completing the unfinished business of the regular annual meeting.

Those present were Drs. Gregory, presiding; McLean, Ludlam, Clark, Haskell and Rauch.

The Secretary presented a report of the progress of vaccination of school children; of the present status of the small-pox epidemic, and of the amount of office work done since the meeting in January; which report was accepted.

## *Tank-Sewage, Slaughtering and Packing Nuisances:*

Mr. Hugh Maher, a chemist of Hyde Park, having been introduced by the Secretary, briefly explained his plan for the utilization of tank-sewage and the consequent abatement of the nuisance arising therefrom.

On motion of Dr. Ludlam, the President was authorized to appoint a special committee to investigate the subject of nuisances arising from the slaughtering and packing industries, and to invite plans or suggestions for the abatement of the same. The President appointed Drs. Rauch and McLean such committee.

## *Chicago School of Midwifery:*

The Secretary reported his action in connection with the Chicago School of Midwifery, and read the correspondence on the subject. On motion of Dr. Haskell, the report was accepted and the Secretary's action endorsed by the BOARD.

## *J. K. Richie, of Mendota:*

The action of the Secretary in refusing to issue a certificate to Dr. J. K. Richie, of Mendota, LaSalle Co., was approved.

## *H. N. Brown, of Pontiac:*

The Secretary was authorized to expend a sum not exceeding fifty dollars, if, in his judgment, necessary to the proper prosecution of the pending suit against H. N. Brown, of Pontiac.

*J. H. Campfield, of Ottawa. W. McMenamy, of Mt. Sterling:*

The certificates of Drs. J. H. Campfield, of Ottawa, LaSalle Co., and W. McMenamy, of Mt. Sterling, were revoked.

*C. A. Miner, of Chicago:*

In the matter of the application of Dr. C. A. Miner, of Chicago, for restoration of his certificate, action was temporarily suspended.

*Cited to Appear:*

The Secretary was instructed to cite the following persons to appear before the BOARD at its next meeting, and answer charges pending against them, viz: Isaac J. Sanders, of Sparta; J. S. Holloway, of Hennepin; and Benjamin G. Miller, of Streator. He was also directed to notify the parties making such charges that an opportunity would be then afforded them for substantiating the same.

*George Bollen, of South Australia:*

Dr. Ludlam called attention to the case of Dr. George Bollen, formerly a practitioner in this State, but at present residing in South Australia, the laws of which country deny him certain professional rights and privileges in consequence of his not holding a certificate from this BOARD. On motion of Dr. Ludlam, the following preamble and resolutions were adopted in the premises:

WHEREAS, The ILLINOIS STATE BOARD OF HEALTH has information that, by the laws of South Australia, George Bollen, M. D., is precluded from certain rights and privileges of his profession by reason of his failure to hold the certificate of this BOARD, under the Medical Practice Act, as a condition of the practice of medicine in this State; and,

WHEREAS, It is already known to this BOARD that the said George Bollen, M. D., is entitled, under the act, to his certificate as a practitioner, on receipt of the necessary affidavit touching his diploma; therefore, be it

*Resolved*, That the Secretary be authorized to issue the proper certificate on receipt of such affidavit.

*Resolved*, That this action of the BOARD is to the intent and purpose that the said Dr. Bollen may be recognized as an authorized practitioner of medicine, in all its branches, pending the arrival of his affidavit.

On motion, the Secretary was instructed to forward an official copy of the record of the BOARD's action to the authorities of South Australia, through the Department of State, and to Dr. Bollen.

*Immigrant Introduction of Small-Pox:*

Dr. O. C. DeWolf, Health Commissioner of Chicago, who was present by invitation,\* being introduced to the BOARD, detailed the results of his recent visit to the Atlantic seaboard, described the administration of quarantine at New York, and ended by announcing his firm conviction that the present quarantine system, while unquestionably efficient for the immediate protection of the port of arrival, was totally worthless as a barrier against the introduction of such a contagious disease as small-pox into the interior. The only remedy, in his judgment, lay in the direction of National legislation, which should compel the vaccination of all immigrants before being received on board ship at the port of departure.

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\*Dr. Hosmer A. Johnson, the resident member of the National Board of Health, had also been invited to be present and participate in the discussion of the question of maritime quarantine, but was unavoidably absent from the city.

Dr. DeWolf was followed by City Comptroller Gurney, of Chicago, who stated that he proposed accompanying Dr. DeWolf to Washington to secure the legislation indicated.

The Secretary was appointed a special committee to draft a memorial upon this subject to the Commissioners of Emigration at the port of New York, and the President and Secretary were authorized to represent the BOARD in pushing the pending legislation before Congress.

The Secretary subsequently presented the following memorial to the New York Commissioners of Immigration, which, on motion of Dr. Clark, was adopted, and the Secretary instructed to transmit the same:

*To the Honorable the Commissioners of Emigration of the Port of New York:*

GENTLEMEN:—The ILLINOIS STATE BOARD OF HEALTH respectfully begs leave to represent to your honorable board certain facts connected with the introduction and spread of small-pox throughout the Northwest.

On all lines of emigrant travel extending from your port into the interior, the presence of this disease during the past year has seriously affected the health, well-being, and material interests of many communities, and the commercial interests of the larger cities.

It has been asserted, and is still assumed to be true, that this serious and widespread infection was introduced and is continued by the presence of large numbers of unvaccinated emigrants following our great lines of travel. It is also asserted by the sanitary authorities of our interior cities, that without the protective power of vaccination is secured, we cannot hope for present relief from this scourge. We therefore urgently request the commissioners in charge of the operations of quarantine at the most important port of entry in this country, to require the vaccination of all emigrants before being received on board ship for your port.

We desire respectfully to remind your honorable board that the administration of quarantine at the port of New York, especially with reference to small-pox, is not a matter of exclusively local concern, but that, as the port is the chief gateway for the enormous number of emigrants distributed thence to all parts of the Union, such administration has a National importance.

#### *The School-Vaccination Order:*

The Secretary called attention to certain questions suggested in connection with the further execution of the school-vaccination order, to-wit:

1. What further measures may be wisely adopted, or modification of existing orders be made, with reference to the vaccination of school children.

2. How can the immense amount of material now at our disposal be best utilized for the prevention of future epidemics of small-pox.

He stated that while the results already attained amply justified the wisdom and timeliness of the action of the BOARD, certain considerations, which he stated, seemed worthy of consideration. After which, on motion of Dr. McLean, it was

ORDERED, That the Secretary be authorized to take such steps as, in his judgment, may be necessary to secure the completion of the work of a full protection of the school children of the State against small-pox; which disease still exists to some extent, and is liable again to become prevalent so long as the enormous immigration continues, and while any considerable number of persons remain unprotected in any community.

On motion of Dr. Ludlam, the Secretary was authorized to prepare and have printed and distributed a sufficient number of blanks suitable for the completion of data connected with the small-pox outbreak.

*Vital Statistics :*

The Secretary announced that blank forms for returns of births, for the use of the county clerks in reporting to the BOARD, had been prepared and distributed to those officers throughout the State.

*Election of Officers :*

The annual election of officers resulted in the re-election of John M. Gregory, President; John H. Rauch, Secretary, and A. L. Clark, Treasurer.

Adjourned to next quarterly meeting.

# REGULAR QUARTERLY MEETING.

APRIL, 1882.

THE BOARD met at the Grand Pacific hotel, Chicago, in quarterly meeting, April 13-14, 1882, with Drs. McLean, Clark, Haskell, Rauch and Bateman present—Dr. McLean in the chair in the absence of the President.

The application of Dr. Rose, of Princeton, for an oral examination as to his qualifications as a medical practitioner, was, after discussion, granted.

The Secretary presented his quarterly report, in which was discussed the status of the small-pox epidemic, its origin in certain localities, and the necessity of more stringent measures for securing vaccinal protection; statistics of vaccination received by the BOARD, and particularly of the vaccination of school children in compliance with the BOARD's order; and contained a recital of measures taken to secure a more thorough immigrant inspection.

## *Immigrant Inspection Service:*

The Secretary also submitted the draft of a letter to the National Board of Health, respecting the proposed immigrant-inspection service; and it was thereupon

*Ordered*, That the Secretary be authorized to apply to the National Board of Health in the name of the ILLINOIS STATE BOARD OF HEALTH, for such co-operation and aid as the said National Board may legally extend for the discharge of the duties devolved upon the BOARD by the proposed immigrant-inspection service, and that he transmit with such application the estimate which he has prepared, and which is hereby approved.

[The following is a copy of the letter and estimate:]

SIR:—In accordance with the instructions contained in Circular No. 7, N. B. H., 1879, paragraphs 2, 3 and 4, application is hereby made for such co-operation and aid from the National Board of Health as may be necessary to enable this BOARD to discharge the duties which may be devolved upon it in connection with the proposed Immigrant-Inspection Service—for the prevention of the further importation of small-pox into this country—the plan and details of which Service are understood to be known and approved by the National Board of Health.

This BOARD has formally adopted all rules and regulations which have been recommended by the National Board concerning the prevention of the spread of contagious and infectious diseases, so far as the same are applicable; and has, from time to time, officially notified the National Board of such additional rules and regulations as have been promulgated by this BOARD.

Reference is made, in this connection, to the accompanying estimate of items of proposed expenditure, and details thereof; to the copy of circular letters to railroad officers and to other health authorities on the subject of this Service; to the preamble and resolutions adopted at the last meeting of this BOARD, to-wit: April 13-14; and to the official certificate of the Governor of the State, that there are no State funds available to carry out the particular sanitary measures because of which this application is made.



In view of the repeated proved importation of small-pox into this and adjoining States—the most recent being into at least six localities in Illinois, namely, into the cities of Chicago, Ottawa and Rock Island, and into Edgar, Logan and Livingston counties, by immigrant passengers of the Bremen steamer, Hermann, via, Baltimore, March 12th, and, further, in view of the rapidly increasing tide of immigration into the interior, it is earnestly hoped that no time may be lost in inaugurating the Service; but that the response of the National Board may be so prompt as to enable inspections to begin May 1, prox.

I am, sir, very respectfully,

JOHN H. RAUCH, M. D., *Secretary.*

By order of the BOARD.

DR. THOS. J. TURNER, U. S. N.,

*Secretary National Board of Health, Washington, D. C.*

(3 enclosures.)

Estimate of Funds and Supplies required for the use of the Illinois Branch of the Immigration-Inspection Service of the National Board of Health, for the month of May, 1882:

*For Salaries:*

Five (possibly six) inspectors to cover five trunk lines, leading into Chicago, and the Mississippi river at East St. Louis.....	\$850 00
Five (possibly six) deputy sheriffs to accompany said inspectors.....	350 00

*For Disinfection, Vaccination, etc.:*

Probable expense.....	500 00
For incidental expenses.....	500 00

Salaries and pay to be graded according to the duties and amount of time required of each person employed.

It is to be understood that while, on the one hand, it may not be necessary to expend all of any one of these sums for the items specified, on the other, contingencies may arise when it would be necessary to make an emergency requisition—as, for example, in the not improbable event of having to care for small-pox patients found in transit, or having to vaccinate large numbers of immigrants. Although it is proposed to remove such patients (found in transit) to municipal hospitals whenever practicable, it is believed provision should be made for the supply of hospital equipment, either by purchase or by the use of that already in possession of the National Board, so as to be prepared for an emergency. A site has already been selected in the neighborhood of Tolleston, Indiana, whereon to establish a field hospital which will accommodate four of the trunk lines. For such hospital there would be required:

Six hospital tents, poles, pins, etc.

Twenty-four cots, mattresses and necessary bedding.

Kitchen and commissary equipment for twenty-four persons.

Depots of disinfectants should also be established, and to supply these the necessary disinfectants in store at Cairo should be subject to order.

It is probable that after the first month the expenses would steadily decrease, if, as is believed, the effect of the inspections is found to render precautions less urgent at the Western stations.

The Illinois inspectors will be clothed with the authority of the State and local boards of health, in whose territory it may be necessary they should operate; and this authority will be conferred upon inspectors from other States on entering Illinois.

The Service being novel, and the preliminaries largely tentative, no more specific details can be furnished at this time.

*Exclusion of Yellow-Fever:*

The Secretary offered the following preamble and resolutions, concerning the exclusion of yellow-fever:

WHEREAS, It has been demonstrated that the geographical position of Illinois, and its relations with the lower Mississippi valley by rail and river, are such as to render the State subject to invasions of yellow-fever, whenever that disease gets a foothold below; and

WHEREAS, It is believed that the exclusion of yellow-fever from that region can only be effected through National agencies, operating for the general welfare, without regard to State boundaries and uninfluenced by merely local considerations; Therefore, be it

*Resolved*, That the ILLINOIS STATE BOARD OF HEALTH formally approves of the action of such State and local boards of health in the exposed territory as have adopted the rules and regulations, and have conformed to the advice, requirements and suggestions of the National Board of Health upon this subject.

*Resolved*, That this BOARD renews its approval of the Mississippi river inspection-service of said National Board of Health; and in the event of yellow-fever appearing on the lower Mississippi during the coming summer, the Secretary be, and he hereby is, authorized to make application to the National Board of Health for the establishment and maintenance of an inspection-station, or stations, of said service, to be located at such point or points as, in his judgment, will be best calculated for the protection of the State against the introduction of said disease.

*Resolved*, That in such event, no railroad or steamboat travel or traffic from any point or place within the compromised territory to any point or place within this State, be permitted, except in accordance with the rules, regulations and requirements of the National Board of Health.

*Resolved*, That the Secretary be, and he hereby is, instructed to transmit duly authenticated copies of this preamble and the resolutions to the Secretary of the National Board of Health, and to the secretaries of the various State and local boards of health interested.

The preamble and resolutions were adopted, as expressing the sense of the BOARD.

### *Burial-Permit Ordinance:*

The following resolution was adopted relative to the adoption, in cities and towns, of an ordinance requiring burial permits:

*Resolved*, That in order to protect the legal interests of survivors, to facilitate the detection of crime, and to secure fuller and more accurate knowledge of the causes of mortality, whereby preventive medicine and general sanitation may be promoted, the ILLINOIS STATE BOARD OF HEALTH earnestly recommends to the proper authorities of all cities and towns in this State having populations of one thousand or over, the enactment and enforcement of a suitable ordinance requiring a burial permit from a designated official, and based upon the physician's certificate of death *now required by the statute*, as a condition precedent to interment within, or removal of a decedent without, the corporate limits of such city or town.

The matter of the return of the causes of death by county clerks was referred to the Secretary, with power to act.

### *C. A. Miner, of Chicago:*

The certificate of Dr. C. A. Miner was ordered restored to him on receipt of satisfactory guarantee for the future.

### *Delegates to the Sanitary Council:*

On motion of Dr. Clark, Drs. Rauch, McLean and Haskell were appointed to represent the BOARD at the forthcoming meeting of the Sanitary Council of the Mississippi Valley, at Cairo.

### *Examination of Candidates for Certificates:*

Sixteen applicants for certificates as medical practitioners presented themselves for examination. The following are the names of the gentlemen who obtained the required percentages:

J. C. ANDERSON, Ash Grove, Illinois.

A. B. BISHOP, Chicago.

CHAS. C. DRANSFELD, St. Louis, Mo.

PATRICK SWAIN, Long, Ill.

J. B. CARLILE, Bowensburg, Ill.

O. T. WOOLHISER, Freeport, Ill.

The schedules of examination in the various branches (80 per cent of correct answers required) were as follows:

### *Examination in Anatomy.*

By W. A. HASKELL, M. D.

1. Name the bones of the carpus.
2. With what bones does the sphenoid articulate?
3. Describe a vertebra.
4. Describe the ligaments of the hip joint.
5. Name and describe the pronator muscles of the forearm.

6. Give the relations of the femoral artery and vein.
7. Describe the thoracic duct.
8. Give the distribution of the median nerve.
9. Where is Wharton's duct?
10. Describe the liver.

### *Examination in Physiology.*

BY JOHN McLEAN, M. D.

1. What is the action of saliva in digestion, and what are its chemical constituents?
2. Describe the digestion of starch and of fats.
3. Give the source and use of animal heat.
4. How is gastric juice formed, and what is its composition?
5. Explain the secretion of bile, its composition and use.
6. Explain the physiology of sleep.
7. Describe the fetal circulation.
8. What nerves are directly concerned in the act of respiration?
9. Describe the circulation of blood in the fetal heart.
10. What causes the sounds of the heart?

### *Examination in Chemistry.*

BY A. L. CLARK, M. D.

1. What is meant by a qualitative, and what by a quantitative, analysis?
2. How would you test water for organic impurities?
3. Is hard or soft water most liable to contamination by passage through, or standing in, lead pipes, and why?
4. How would you test a suspected water for salts of lead in solution?
5. Give the names and symbols for ten elementary substances.
6. Name substances with which it is incompatible to unite KI in prescriptions.
7. What chemical elements are contained in pure grape sugar not found in cane sugar?
8. What liquid is the most universal solvent?
9. What is the difference between analysis and synthesis?
10. What precautions are necessary in handling chloroform in the presence of flame or fire?

### *Examination in Materia Medica and Therapeutics.*

BY J. H. RAUCH, M. D.

1. Classify remedial agents, broadly, by their actions and uses.
2. Name some of the principal agents in each class.
3. Name the principal urino-genital remedies, and write five prescriptions, embracing a different one in each. Give the indications intended to be met by each prescription.
4. What alteratives, emetics and cathartics are indigenous to Illinois?
5. Give the sources, active principles, two or more official preparations, and uses of (a) camphor; (b) ergot; (c) nux vomica; (d) opium; (e) physostigma.



6. Describe the therapeutie uses of the bromides, and write prescriptions for each of three of them, with indications.
7. Mention some of the most important recent additions to the materia medica, with their uses.
8. Give the therapeutic uses and applications of *aqua fluvialis* or *fontana*.
9. Mention the different officinal preparations of antimony.
10. Give the doses of (a) ammonii phosphas; (b) iodoformum; (c) strychnia sulphas; (d) acidum boracicum; (e) extr. belladonnae ale.; (f) atropia sulphas; (g) resina podophylli; (h) tr. aconiti rad.; (i) extr. gelsemii fld.; (k) acidum hydrocyanicum dilutum.

### *Examination in General Pathology.*

BY R. LUDLAM, M. D.

1. Give a definition of disease.
2. What is the difference between a predisposing and an exciting cause of disease?
3. Name the means employed in physical diagnosis.
4. What is meant by "a qualified prognosis"?
5. What forms of inflammation are reparative?
6. How would you recognize the cancerous cachexia?
7. What diseases are incident to the hemorrhagic diathesis?
8. In what diseases do we often find albumen in the urine?
9. What form of erysipelas is inoculable?
10. Why do attacks of pelvic and portal congestion frequently alternate with each other?

### *Examination in the Practice of Medicine.*

BY JOHN McLEAN, M. D.

1. What are the symptoms of variola, and its treatment?
2. How would you diagnose variola from varicella?
3. Give etiology, pathology and treatment of cholera infantum.
4. What is hysteria, and its treatment?
5. Give etiology, pathology and treatment of epilepsy.
6. Give diagnosis and treatment of eczema squamosa.
7. Give pathology, causes and treatment of typho-malarial fever.
8. Give differential diagnosis of diphtheria, and its treatment.
9. Give symptoms and treatment of leucoeythemia.
10. Give symptoms and treatment of acute idiopathic erysipelas.

### *Examination in Surgery.*

BY W. A. HASKELL, M. D.

1. Define inflammation.
2. What is the difference between ulceration and mortification?—between caries and necrosis?
3. What is a tumor?
4. Give illustrations of a benign, and of a malignant, tumor.
5. Give the treatment of mammary abscess.

6. Explain the *modus operandi* of reduction of the iliac dislocation of the head of the femur, by manipulation.
7. Give the differential diagnosis of compression and concussion of the brain.
8. Give the differential diagnosis of inguinal hernia and hydrocele of the cord.
9. Give the diagnosis of morbus coxarius—
  - (a) During the first stage before the occurrence of effusion.
  - (b) During the first stage of effusion—the capsule of the joint remaining entire.
10. Give the general treatment of fractures of the lower extremities.

### *Examination in Obstetrics.*

BY A. L. CLARK, M. D.

1. Define obstetrics.
2. How can you differentiate pregnancy from ovarian tumor or cyst?
3. At what period or stage of labor is there the greatest danger to the mother, and what is the danger?
4. Give the contra-indications to the use of ergot.
5. Under what circumstances should version be performed?
6. Will the mother's blood pass out from the umbilical cord unless this be tied before being cut?
7. Give diagnosis and treatment of puerperal eclampsia.
8. Give diagnosis and treatment of hydrocephalus of the infant during parturition.
9. What is the shape of the posterior fontanel?
10. Give the treatment for prolapse of the funis umbilicalis.

### *Examination in Gynecology.*

BY R. LUDLAM, M. D.

1. What are the uses of the uterine sound?
2. What diseases are accompanied by an increased depth of the womb?
3. In constipation, with or without hemorrhoids, which ovary is most frequently inflamed, and why?
4. What intra-pelvic inflammation is most frequently rheumatic?
5. What diseases are followed by fixity, or anchorage of the uterus?
6. Name the most frequent cause of menorrhagia in women who have had one or more children.
7. Define a menstrual headache, and give the treatment for it.
8. What are the sources of puerperal traumatism, and what are the most serious lesions that may result from it?
9. In a lying-in patient, how would you distinguish a physiological from a pathological chill?
10. When are mammary abscesses salutary?

### *Examination in Hygiene.*

BY J. H. RAUCH, M. D.

1. Give the prophylaxis of small-pox, and the measures to prevent its spread on the appearance of the first case.
2. To what extent should vaccination be made compulsory in the United States, and why?

3. What is "ground-water," and what is its agency on health?
4. Describe the principal disinfectants, their applications and modes of use.
5. Formulate a set of rules for school hygiene.
6. What is "sewer-gas," and what evils are ascribed to it?
7. Give the differential diagnosis, for sanitary purposes, of (a) scarlatina; (b) rubeola; (c) varicella; (d) variola; (e) febris flava; (f) cholera Asiatica; (g) trichiniasis.
8. Describe vaccination and its progress through the different stages; the effects ascribed to it; its complications; and the ages at, or conditions under, which it should be repeated.
9. What are the chief causes of an excessive mortality, and their remedies?
10. Describe Pasteur's recent experiments.

### *Examination in Medical Jurisprudence.*

By JOHN H. RAUCH, M. D.

1. At what age is the fœtus viable, and what are the signs and indications of such age?
2. What precautions—other than for the safety of the subject—would you observe in the exhibition of an anæsthetic, and why?
3. How would you determine whether lesions, injuries or discolorations, found on a cadaver, were produced before or after death?
4. What is the course of procedure in the commitment of persons to an insane asylum in this State?
5. Has the registration of vital statistics any legal bearing, and, if so, what?

# REGULAR QUARTERLY MEETING,

JUNE-JULY, 1834.

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At the regular quarterly meeting, held in Chicago June 30-July 1, 1834, the members present were Drs. Gregory, Rauch, Bateman, Ludlam, Haskell and McLean—the President in the chair.

The Secretary presented a report on the progress of the small-pox epidemic. The number of infection-centers was shown to have increased during the last quarter from 168 to 190, while there remained only nine points in which the disease had not been suppressed, as compared with thirty-one at the date of the last report, this being the lowest number since September, 1831. Only one case had been reported among immigrants arriving in the State since the inauguration of the immigrant-inspection service.

The Secretary also presented a report covering the details of the immigrant-inspection service of the National Board of Health in the district under his charge, comprising the States of Illinois, Indiana and Missouri. The report set forth the establishment by the National Board, in response to requests from a number of State boards, of a system of sanitary inspection of immigrants, and indicated some of the principal points of inspection. The history and number of inspections in the district were shown, and the methods and agencies employed were detailed. Facts were stated establishing the importance and value of the inspection as conducted, and showing how little value should be attached to "protection cards" issued by steamship surgeons in the absence of other evidence of vaccination. The completion of arrangements with local authorities at various points for the reception and care of small-pox patients found among immigrants was also announced. The report concluded by calling attention to the gratifying results already attending the inspection, as shown by the diminution of new cases in Chicago (attributed by Health Commissioner DeWolf directly to this source), as well as by the contrast throughout the State at large between the present report and those for preceding months.\*

This report was referred to a special committee, consisting of Drs. Bateman and Ludlam, with instructions to formulate an expression of the BOARD concerning the Immigrant-Inspection Service with

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\*For details concerning the Small-Pox Epidemic and this Service, see Appendix.

recommendations thereon, if such be necessary; a copy of the same to be forwarded to each State Board of Health interested, and to the Secretary of the National Board of Health. This committee subsequently presented the following:

WHEREAS, Small-pox still continues to manifest itself in epidemic proportions throughout the Northwest, directly as the result of increased immigration; and

WHEREAS, Efforts of State and local authorities to cope with this disease are only measurably successful, owing to their inability to deal with the source of contagion beyond the confines of their respective jurisdictions, State or municipal; Therefore, be it

*Resolved*, That the action of the National Board of Health in establishing and maintaining, at the request of the various State boards, an immigrant-inspection service to prevent the further introduction of the contagion of small-pox into the United States, and from one State to another, by the medium of immigrants and their baggage, is hereby cordially approved by the ILLINOIS STATE BOARD OF HEALTH as a measure of vital importance to the health and welfare of this State, as well as of the entire Northwest.

*Resolved*, That during this, the first month's operation of the service, it has already demonstrated its utility in reducing the number of importations from an average of ten per month for the past eight months, to one solitary instance during the present month, and has thereby established a sufficient claim for its further continuance and extension.

*Resolved*, That the Senators and Congressional Representatives of this State be earnestly requested to secure such appropriation for the work of the National Board as will enable it to make this protective work as effective as possible—this request being further emphasized by the recent appearance of yellow fever both on the Gulf coast and on the Atlantic seaboard.

The preamble and resolutions were unanimously adopted, and the Secretary was instructed to telegraph them to Congressman Aldrich, at Washington.

### *Burial-Permit Ordinance:*

The Secretary presented the form of an ordinance concerning burial permits, together with a letter to accompany the same, addressed to those interested.

On motion of Dr. Bateman, the papers were accepted and approved. Their text is as follows:

### ILLINOIS STATE BOARD OF HEALTH.—NO 102.

OFFICE OF THE SECRETARY,  
SPRINGFIELD, July 15, 1882.

DEAR SIR: At a regular meeting of the STATE BOARD OF HEALTH, held April 13-15, 1882, the following resolution was adopted:

*Resolved*, That in order to protect the legal interests of survivors, to facilitate the detection of crime, and to secure fuller and more accurate knowledge of the causes of mortality, whereby preventive medicine and general sanitation may be promoted, the ILLINOIS STATE BOARD OF HEALTH earnestly recommends to the proper authorities of all cities and towns in this State, having populations of one thousand or over, the enactment and enforcement of a suitable ordinance requiring a burial permit from a designated official, and based upon the physician's certificate of death *now required by the statute*, as a condition precedent to interment within, or removal of a decedent without, the corporate limits of any such city or town.

A form of such ordinance is herewith presented, and it is hoped you may be able to secure its enactment.

It should be observed that wherever such an ordinance is adopted the certifying physician is relieved of the necessity of transmitting his certificates direct to the county clerk, but will simply return them to the designated city or town official, who will forward them to the county clerk after using them as the basis for the burial permit. This has been found to work well practically in places where burial permits are required. It helps to secure a more general compliance with the law requiring physicians to report all deaths occurring under their supervision, with certificates of the causes thereof.

The manifest object of the State law is to secure such knowledge of the causes of mortality as may lead to measures for removing or modifying such causes as are susceptible of removal or modification. This is of primary importance to cities and towns, since



a reputation for healthfulness or the reverse undoubtedly influences the growth and prosperity of any given locality. By means of the burial permit and its record, the facts contained in the physician's certificate may be made immediately available for this purpose, while they cannot be where returned direct to the county clerk. From the "suitable book," prescribed in section 4 of the ordinance, a weekly or monthly report may be compiled for publication, either in the newspaper press or otherwise, and thus the condition of, and the influences affecting, the public health may be accurately judged at any given time, and comparison made with other localities.

Where burial permits are required—as they are in many places—the existence of a contagious disease—as small-pox, scarlet fever, diphtheria—has often first been made known by the information given in the permit, which thus serves to direct preventive measures for arresting further spread of the contagion.

On the other hand, in the absence of a burial permit many evils arise, among which may be mentioned the fact that the bodies of murdered persons may be more easily disposed of. Within a very brief period three such instances have come to the Secretary's knowledge where the bodies of the victims were buried without exciting suspicion. Accidental clues led to disinterment, and discovery of the crimes.

Briefly, the reasons for the enactment of such an ordinance may be thus summarized:

*First*.—It will be of value in securing fuller, more accurate, and more readily available knowledge of the causes of death—a knowledge which is absolutely necessary to the profitable application of efforts for the preservation of health, the limitation of disease, and the prolongation of human life.

*Second*.—It will be of value in the protection of life against criminal violence, by facilitating the detection of such violence through preventing the burial of victims of homicide, abortion, poisoning, etc., without proper investigation.

*Third*.—It will be of value in the protection of property interests, by making the facts pertaining to a death and burial matters of record which may be useful in probating wills, settling estates, determining heirships, perfecting letters, adjusting life insurance and kindred matters.

For the foregoing reasons your interest and influence in behalf of the measure are confidently anticipated.

Very respectfully,

JOHN H. RAUCH, M. D.,  
*Secretary.*

S. B. H.—No. 103.

#### AN ORDINANCE IN RELATION TO BURIAL PERMITS.

*Be it ordained by the..... of the..... of.....  
in the county of..... in the State of Illinois:*

1. That no burial or interment shall be lawful in the ..... of ..... nor shall any dead body be removed from said ..... until a permit for such burial, interment or removal shall have been first obtained from the ..... of said .....

2. That such permit shall be issued by the ..... upon his receipt of the usual certificate of death, signed by (1) the attending physician in the case; or, if none, by (2) one of the parents of the deceased; or, if none, by (3) the nearest of kin not a minor; or, if none, by (4) the resident householder where the death occurred; or, if none, by (5) any reputable citizen cognizant of the facts and circumstances of the death; or, if the death be the subject of an inquest, by (6) the coroner or other officer holding said inquest.

3. That any undertaker or sexton, and each and every other person engaged or concerned in a burial in violation of the provisions of this ordinance, and the officers and employes of any transportation company, or any other person or persons engaged or concerned in the removal of a dead body from said ..... in violation of the provisions of this ordinance, shall be subject to a fine of not less than ..... (....) dollars, nor more than ..... (....) dollars for each offense.

4. That the ..... shall enter in a suitable book, to be kept for that purpose, a record of all burial permits issued, specifying the date of issue and to whom issued, together with all the items of information contained in the certificates upon which the issue of such permits is based; and he shall forward to the county clerk of ..... county, at the end of each month, all of said certificates so received during the month.

5. That this ordinance shall be in force from and after its passage and approval, and due publication.

*Vital Statistics—Return of Deaths:*

The Secretary submitted the form of blank for return of causes of death, required by law to be made by county clerks, as also the manuscript copy of a list of synonyms intended to facilitate the work of making out the blanks.

On motion of Dr. Haskell, the blank was approved and the list of synonyms ordered printed.

*U. S. Marine Hospital, at Cairo:*

The following correspondence, concerning sundry evils arising from the location of the office of the surgeon and the provisions for the care of marine-hospital patients at the port of Cairo, was submitted:

ILLINOIS STATE BOARD OF HEALTH,

SECRETARY'S OFFICE, Springfield, June 9, 1882.

MY DEAR SIR:—I enclose you the petition of the citizens of Cairo concerning the marine-hospital service at that port, and addressed to the STATE BOARD OF HEALTH OF ILLINOIS, as also the letter addressed to me on the same subject. I have marked a passage in this letter and fully endorse the statements therein made, to-wit: that the conditions complained of are not justly chargeable to the officers, or to the administration of the marine-hospital service.

It is mainly on this account that I send you the petition, in order that it may assist you in the effort you are now making to secure an appropriation for a hospital of the service at that port, and which, when constructed, should remedy the evils of which complaint is now made. Of course, this will be the only satisfactory and adequate remedy.

I have written Senator Logan and Representative Thomas, and will do whatever else is in my power, as will also the BOARD, to assist you in securing the necessary appropriation.

Meanwhile, I would ask: Is there no temporary arrangement which can be made to afford present relief? You will readily see that this appeal makes it imperative upon the STATE BOARD to take action in the premises; but it is in every way preferable that you take the initiative. Gov. Cullom, who has carefully read the petition and letter, is emphatic in his expression that something should be at once done in response to this well-founded complaint; and in this, I need hardly say, I entirely concur.

Please return the petition and letter, together with your reply, on or before the 25th inst., as it is necessary the matter should be laid before the BOARD at its forthcoming meeting, June 29, inst.

Very truly yours,

JOHN H. RAUCH.

To the Supervising Surgeon-General, U. S. M.-H. S.,

Washington, D. C.

ILLINOIS STATE BOARD OF HEALTH,

SECRETARY'S OFFICE, Springfield, June 9, 1882.

MY DEAR SIR:—A petition, signed by the mayor, city officers, aldermen, members of the board of health, and of the board of education, and upwards of 400 of the most prominent professional and business men of the city of Cairo, has been sent to this BOARD with regard to the evils arising from contagious and infectious diseases, owing to the inadequate and imperfect arrangements for conducting the marine-hospital service in that city. I have sent the petition and its accompanying letter to the supervising surgeon-general, before calling the attention of the BOARD to it.

If you could make it convenient to look over the petition and letter before their return to this office I think it would repay you; since they present in a very forcible manner the grievance which, at the present time, forms a most important subject of discussion in Cairo.

Of course, the only permanent relief that can be afforded, is the construction of the proposed marine hospital at that point, which Representative Thomas has already taken steps toward securing.

Very respectfully,

JOHN H. RAUCH.

The Hon. JOHN A. LOGAN, U. S. S., Washington, D. C.

A similar letter was sent to Representative Thomas. The following is the text of the petition referred to:

*To the Honorable State Board of Health, for the State of Illinois:*

GENTLEMEN:—Your petitioners, residents of the city of Cairo, would respectfully represent, that the physician in charge of the marine hospital at this port, has his office in the custom house, in the second story over the post office, where all persons entitled to

enter said hospital have to report for examination; that said physician's office hours are from 10 A. M. to 4 P. M., and that frequently persons suffering with infectious diseases present themselves in the corridors of the custom house and post office, and lie down and lounge about for hours, waiting for said physician.

That the building used as a marine hospital is situated in one of the thickly settled portions of the city, where within two blocks are congregated, daily, nearly three-fourths of the school children of the entire city, and on the easterly side thereof, in which direction there is almost a constant breeze.

That in 1873 and in 1876 the small-pox, in 1878 the yellow fever, and within the past few weeks again the small-pox, was, and has been disseminated through the entire city, and that said outbreaks of infectious diseases have been directly traceable to marine patients.

For details we would respectfully refer you to the accompanying maps, showing location of wharves where vessels land, the custom house building and plan thereof, the marine hospital and the several school buildings contiguous, and to certificates of individuals, which can be verified.

And we respectfully ask that your honorable board have the marine physician's office immediately and permanently removed from the custom house and post office building to the marine hospital, and that as soon as possible you have the marine hospital removed to some point contiguous to the river, and away from the business and residence portions of the city, and for which we will ever pray.

Some relief had been obtained by securing access to the surgeon's office by another stair-case, but an adequate remedy could only be secured by the entire removal of marine-hospital patients from the city. The petition had been forwarded by the Secretary of the Treasury to the Speaker of the House, for the purpose of favorably influencing action on the pending proposition to construct a building for this purpose on a suitable site.

On motion of Dr. Ludlam, the Secretary's action in the premises was approved, and he offered the following resolution, which was adopted:

*Resolved*, That, in view of the conditions that obtain at Cairo, with regard to the introduction of contagious and infectious diseases by patients of the United States Marine-Hospital Service at that port, the ILLINOIS STATE BOARD OF HEALTH respectfully urges the immediate construction of a marine-hospital building so situated, with reference to the business and residence centres of the town, as to obviate the dangers and injury to the public health which now result from the present inadequate provision and unsuitable location.

The BOARD then went into executive session, during which the following action was taken:

*M. H. Rowland, of Moline:*

In the matter of the petition of Mrs. M. H. Rowland, of Moline, asking that the BOARD grant her a permit to practice as a student, the Secretary was instructed to reply that the BOARD has no authority, under the law, to grant such permit.

*J. F. Bantyn, of Chicago:*

The application of Dr. J. F. Bantyn, of Chicago, for a re examination in anatomy, surgery and obstetrics—he having failed to obtain the requisite percentages in those branches, at the April examination—was granted.

*Chicago College of Physicians and Surgeons:*

In the matter of the application of the Faculty of the Chicago College of Physicians and Surgeons, that the BOARD should appoint an Examining Board for the candidates for graduation of that institution, it was

*Ordered*, That the application be referred to a committee of three, which committee shall invite the faculty of said college to meet with the committee at an early day for further explanation of the proposition—the result thereof to be reported to the BOARD at its next regular meeting; and the Secretary is authorized to inform the faculty of this action.



The President appointed Drs. Rauch, McLean and Ludlam as such committee.

*Sanitation of Small Cities and Towns:*

Dr. Gregory presented a paper on the sanitary necessities of small cities and towns with reference to their future health interests; which was read, accepted and ordered printed.

At the conclusion of the reading of Dr. Gregory's paper, the usual routine business was resumed, after the transaction of which, the BOARD adjourned.

## ON THE SANITATION OF OUR YOUNGER CITIES.

BY JOHN M. GREGORY, LL.D., PRESIDENT ILLINOIS STATE BOARD OF HEALTH.

The increasing importance of city sanitation, and especially in our younger and smaller cities, induces me to offer some suggestions on this subject. Cities, as centers of population, are more liable than rural districts, both to breed and to spread contagions. Their sanitation is at once more difficult and more important than that of the country places and villages. Sanitary science finds here its best field and its most urgent work. To warn our cities in their youth may save them from disasters in their larger growth.

The remarkable tendency of our times to city growth has already attracted the attention of our census-takers and publicists. Eighty years ago only one-thirtieth of our people lived in cities of over ten thousand inhabitants. To-day nearly one-fourth live in cities of that size and larger. Our rural populations grow dense, but our urban populations increase much more rapidly.

The forces of modern commerce and manufactures all tend to accelerate city growth. Cities, as centers of manufacture and distribution, attract more and more powerfully the working and trading populations; and these tendencies, added to the older social instincts which drew populations together for mutual pleasure and display, for gayety, and for greed, for mutual help and defense, are multiplying the numbers and enlarging the dimensions of our cities in an ever-accelerating rate which may well challenge the attention of publicists and sanitarians. The safety of the State and the health of the people are equally involved in the problems which emerge from this great social fact. In our own great State, marked alike by its central position, its resources, and its surroundings, as a center of commerce and manufactures, the city growth has been characterized by an extraordinary rapidity of development. Chicago may be called one of the wonders of the world in the surprising suddenness with which it has peopled this flat and, at one time, marshy lakeside with the homes, workshops and warehouses of 600,000 citizens. And throughout the State, although with less rapid

stride, our cities have multiplied until, instead of four cities of five thousand souls and upward, we have now twenty-two such cities, and more than 775,000 of our 3,077,871 of population are now living in these cities.

### *The Sanitary Problem:*

Leaving publicists and political philosophers to discuss their side of the subject, we may properly attempt, as sanitarians and as a board of public health, to state the hygienic questions involved. The great sanitary problem before us, and before the people of this State, if not before the men of the country, is: How can ten thousand and upward of people live, work, rear families, manufacture, or receive and distribute the goods of a large area of country, maintaining health, and morals which are essential to health, on a limited tract of land, averaging twenty-five or thirty thousand people to the acre?

To engage the serious attention of our city officers and city builders to the greatness and urgency of this problem is our first step, and a step of the highest importance. Our cities come by chance, and their plans are made by private land-owners, who plan the streets and blocks, and plat "additions" to suit their own tastes, and to sell their lots at the highest figure. The sanitary needs of coming populations have small place in their esteem. These sanitary needs which, at the outset, might have been effectually provided for at small expense, in after years require the outlay of millions, and are only effected after incalculable suffering, sickness, and hundreds of untimely deaths. How much did it cost the people of Chicago to change the grade of its streets after the city was largely built? And how cheaply and effectually could it have settled the now enormous question of its foul ditch-like river, had it been taken at the outset? In one of the smaller cities of the State, \$25,000 were thrown away in a sense, now absolutely useless, if not harmful. How many such outlays have burdened, with needless taxation, nearly every city we have built? Let us, as a STATE BOARD OF HEALTH, say to all the young and growing cities of this State, speaking with all the emphasis we can command: "All present neglect to make the necessary provisions for the sanitary needs of your cities you must pay for in the future by the sacrifice of the health and lives of hundreds and thousands of your citizens, by visitations of epidemics, and by a final expenditure of vastly greater sums to remedy defects, with the probability that many of the worst will remain incurable forever."

Mr. Edwin Chadwick, of England, affirms that he could build a city that would give any stated mortality, from fifty, or any number more, to five, or perhaps some number less, in the thousand annually. Dr. B. W. Richardson says he believes Mr. Chadwick to be correct to the letter in this statement. Ought not such an opinion, uttered seriously by such men, to arouse and rivet the attention of our city-makers, and force them to press persistently the question as to the means to the desired result?

A recent exposure of the dangerous unsanitary condition of Newport, R. I., which is one of the most popular health resorts of the wealthy, and has been held a very "city of refuge" for the invalid and the toil-worn, might well warn the younger cities of the West. One of the citizens, alarmed by these exposures, set to work, it is reported, to investigate his own premises, and found, to his horror and dismay, four old privy vaults within 100 feet of the well from which he and his family drew their drinking water. It is affirmed that in many of the cities and villages of New England in which generations have succeeded one another for 200 years, the ground and the water supply are so poisoned as make sickly populations where natural situation should have given more than average health. Many of our finest houses come in time to be built on ground where once the uncleanly hovels of poverty stood. Who can think of the filth-saturated soil without repugnance and alarm?

#### *A Sanitary Engineer Needed:*

Evidently the first condition to success is the employment of a city sanitary engineer. Every city of from two to five thousand people, which promises to grow greater, should employ, under the direction of its board of health, a competent sanitary engineer, whose first duty should be, in connection with the ordinary city engineer, to make a survey for the proper sewer system for the drainage of the entire territory liable to be covered by the city in its future development. It may not be necessary to build the main sewers of the size which will be ultimately required, but the right location and system of connections and outlets may usually be fixed upon in the beginning. The enlargement, when the city of five thousand has grown to a city of fifty thousand, will be easily made in connection with the repairs which time will demand.

The location of cemeteries, stock-yards, abattoirs, and such manufactories as may come in time to affect public health ought also to be under the control of the sanitary engineer, and he should also have a voice in the disposition and control by the city of any water courses, river banks, harbors, roads, or other waters which may ultimately become needful for public use, or changes in which may become necessary for the public health. Had the city of Chicago secured and retained the right to change the course of the river without first buying out the riparian owners, the great work which her safety now demands could be made at a cost of \$2,000,000, in place of the \$20,000,000 which it is said will now be required. The water supply, the location of gas-works and mains, of streets and parks, of school houses and hospitals should all pass under the supervision of the sanitary engineer. He may also be made the free professional adviser of every private citizen who wishes to erect a dwelling, a store, or a manufactory, and desires to assure himself of the proper sanitary arrangements of the proposed building. He should have the power to prohibit the erection of any building, large or small, whose construction would be dangerous to the health of its occupants. Especially ought he to exercise such oversight in the erection of school houses, churches, public halls, theaters, public library rooms, prisons, hospitals, and almshouses, where the ignorance or parsimony of a few may imperil the lives of the many.

The study of soil and subsoil to determine its liability to saturation with gases or filth, its reservoirs of water needing to be drained, and the drainage into wells used either as public or private water supply, this, also, and a hundred other questions of places, times, and forces of health and sickness will fall to this officer. The skill and service of such an officer is imperative to a young city if it would avoid costly mistakes and would not expose its citizens to the catastrophies of preventable disease, or to the otherwise surecoming epidemic.

The common health officer might perform many of these duties if he had the requisite knowledge, or the sanitary engineer might, if qualified, act also as health officer; but the qualifications required for the two offices are so dissimilar in many particulars that rarely will a man be found to possess them all.

It is said by a high authority in such matters, that we have no true and competent sanitary engineers, and that the wide extent of medical, scientific and professional knowledge required by such an office forbids the hope of finding him. But we have those whose sanitary knowledge fits them to be good sanitary inspectors, and by associating with these needed medical and engineering experts, our cities may secure the indispensable survey and sanitary projection of their territory. Such sanitary survey put upon record would remain to guide the future builders of the city, and would furnish the fit foundation for another's work, when growing needs should lead to his appointment.

We can scarcely do more, now and here, than catalogue the chief sanitary wants and conditions which must attach to every city, small or great. But it will not be useless to present this catalogue, since so often the energetic business men who plan and build our cities are either ignorant of these conditions or in their intense activity forget and overlook them.

### *Location of Cities:*

If it were not that the location of our cities is nearly always determined by circumstances beyond human control, or by accidents which no one can foresee, I should place first in the list of sanitary conditions the choice of a naturally favorable and healthy locality. But since, where the lot falls there it must lie, it remains only for man, by his wealth and wisdom, to overcome the difficulties which nature opposes to his work, and to supply by his labor the good she refuses to bestow. He must, if needs be, turn her marshes into dry ground, and import from whatever distance the supplies of water demanded for his culinary and other personal uses, and for the cleansing of houses and streets. Even the ground on which to plant his dwelling and to raise the grade of his streets has sometimes to be imported from without. If the founders of cities could take account for life as well as for commerce, more healthful and more beautiful locations might be secured. But whatever the location that chance or choice may give to the city, the necessity of a thorough sanitary survey is imperative, and can not, in any case, be safely dispensed with. However healthful at the outset,



the progress of years and the effect of long occupation will be sure to work changes which ought to be foreseen and provided for from the beginning.

### *Plan of City:*

Next to location comes the question of the plan of the city, including the spaces to be devoted to streets, parks, public grounds, and buildings, and especially the location of the institutions in which the young are to be educated, or in which the unfortunate, the criminal, and the infected classes are to be domiciled and provided for.

The location of all these must be planned not only with due reference to the convenience of access and use, and to the social surroundings, but also with a strict regard to soil, sub-soil, slope, natural drainage and the sewer system. It must be recognized at the outset that all these public appurtenances will come, and they should have their proper places assigned them at the earliest hour practicable. How many of our cities are spoiled by lack of foresight, and by the unsightly and unsanitary placing of prisons, hospitals, almshouses and other buildings.

### *Street Space:*

The street spaces in most of our western cities are ample in breadth, but wretched in arrangement. Out of sixty or more feet in width, ordinarily given to city streets, in the newer cities eight feet on each side are devoted to the sidewalks and such shade trees as adjacent lot-owners may plant, and the entire space between, of forty-four to fifty-four feet, is devoted to gutters, dust and mud. This unnecessary breadth usually forbids the expense of pavement, and in the course of years the whole space becomes filled and saturated with filth of every conceivable sort. The air above such streets must either reek with the vile vapors exhaled from them while wet, or the still viler dust lifted from them when dry.

The careful scientific examinations made of common street air by such men as Prof. Tyndall, and equally eminent German scientists, show conclusively how foul and dangerous such air commonly is. As Prof. Tyndall says: "One would shrink with horror from the stream of air entering his mouth and lungs if his eyes could be opened to see the filth, the rottenness and poison, the fragments of waste vegetable and animal tissues, and the disease-bearing germs which fill and load this air, apparently so fresh and clear." Of what use to flush our sewers, cleanse our houses, and disinfect our yards, if the very streets, where we walk or ride for business or pleasure, and, save the mark! for health, are to be left wide expanses of ever-increasing foulness and infection?

True sanitary science would direct that the road-bed shall be made as narrow as the travel upon it will permit. Sixteen feet will allow carriages, and even loaded wagons, to pass each other easily and without danger. Four or six feet added to this, making the road-bed twenty or twenty-two feet in width, will be found ample for ordinary residence streets.

### *The Business Streets:*

May require ten or fifteen additional feet, and when we reflect how much business is transacted in such streets as the business streets of London and New York, our proposed limits will not seem preposterous. By this reduction in width we should not only lessen by nearly one-half the area of danger, but we should make it possible for even small cities to meet the expense of a pavement which might be thoroughly cleaned and kept clean by daily sweepings and ablutions.

Let it not be understood that we would diminish by a single foot the entire street space. We would only widen the walks and stretch an ample border of green grass to beautify and make healthful by its presence the place where so much of human life is at stake. We would import between the long lines of brick walls, of crowded city homes, as much as possible of the freshness and greenness of the country places. Thus both economic and sanitary considerations would lead to this street reform. In our Illinois towns, where good road material is so scarce, and where paving is so difficult and costly, this suggestion ought to meet with prompt favor and adoption.

Paris owes much of its far-famed beauty to these grassy, shady street sides, which stretch like elongated parks through that renowned city. And Washington, our own National capital, is fast becoming the most beautiful city on this continent, if not in the world, by a similar process of narrowing and paving with asphalt its road-beds and widening the long strips of green at their sides. In Illinois, the frightful mud which during so many weeks makes the streets of such cities as Springfield, Bloomington, Decatur, and the younger cities of Champaign and Mattoon, almost impassable, ought to urge upon these, and all cities situated like them, to lessen the road-bed to the narrowest feasible limits, in order that they may be properly paved and purified.

It is a custom in some of the eastern towns to require that each family shall daily sweep the walk and half the street in front of the premises it occupies. If the road-bed were made narrow and well paved, as we propose, this requirement would not be a hardship, and streets thus cleansed could not seriously offend against sanitary laws.

### *The Parks of our Cities:*

Ought also to receive the attention of all who would make the cities both healthful and beautiful. Great breathing places they are, where the tired population, and especially the infant and invalid, may come nearer to nature, with its green fields, its vivifying sunshine, and its gratefully cooling shades, and find themselves refreshed and made purer in heart and life by her always kindly and wholesome ministrations to her children. There is, perhaps, no sanitary provision which compares in cheapness and efficiency with these. As all house life is more or less unhealthful, the more our people can be tempted with the open air the better for them; and when we add the inspiring social influence of the neighboring park, we shall see how both mind and body are helped by it. It is not



sufficient that there shall be great and expensive parks upon the distant outskirts of the city to which the crowds may go on gala days. There should also be smaller parks and play-grounds scattered through the city, which shall invite by their proximity, as well as by their beauty, the tired house-wives, the suffering invalids, and the nurses with the children out of the houses and out of the streets. Let the city authorities make it a law that no land-owner shall be permitted to make an addition to the city's limits without giving at least one block in every ten of his proposed addition to the public as a park. Had Chicago done this forty years ago, to day she would have scattered through her denser portions, a score or more of beautiful little parks, like Jefferson and Union parks; and whoever will visit those bits of open ground and see the crowds which frequent them, will easily conclude what a world of joy and health and happiness would have come to our great Queen city from such wise foresight in its early founders and builders. If our younger cities would take the hint, they may be better provided.

The early planting of these parks with the elm, the maple, or other of our American shade trees, would enhance at once their value and their beauty. Let the birds come to mingle their carols with the glad laughter of the children at play beneath the shade, and cheer tired men and woman into happier and healthier moods of thought and feeling, and renew wasted energies and health. The well-kept public park is the noblest boon a city ever gave to its children and its poor. I never see one with its groups seated in the shade or strolling along its winding walks by mimic lakes, or banks of flowers that I do not feel in my heart a rising benediction to the wisdom and public spirit that planned it.

### *Water Supply:*

The water supply, by general agreement of leading sanitary authorities, is one of the most important of the sanitary needs of cities, if it does not lead all others. While, however, these authorities justly lay stress upon the vital importance of purity, too many others are so far influenced by purely engineering considerations as to limit the supply to a quantity far below not only what the sanitarian would regard as necessary, but even below the amount actually furnished in most American cities. Thus, while Parkes, Denton, Rankine, Latham and other English authorities, consider from 25 to 35 gallons per head per day sufficient for all domestic, manufacturing and other purpose; and Nichols, in the standard American sanitary authority (Buck's *Hygiene*,) regards an average of 60 gallons per day for each inhabitant as a very liberal provision; yet, as a matter of fact, the average supply in American cities is about 65 gallons per capita.

Even this is wholly inadequate for the sanitary requirements, and the lack is more fatal to public health than our people suspect. The relations of water to life and health are as yet only half understood. Its influence upon the air we breath may be conjectured if we compare the healthfulness of the seaside with that of the arid desert; or if we note the effect of the rain which comes to break a

long and enervating drought. Our city builders should heed these lessons, and take in within the scope of their plans an ample, inexhaustible supply of pure and wholesome water.

No sewer system, however wisely arranged, can succeed without an ample water supply. The occasional flushing is not enough. A strong current, and the stronger the better, must be kept moving through these dark channels of filth. The flushing ought also to be more frequent than is common. The supply must, therefore, be sufficient, not only for culinary and other household uses, for lavatories, water closets, and all cleansing purposes, but also for the constant flushing of sewers, the extinguishing of fires, the washing and sprinkling of streets, the watering of parks, the supply of public fountains and water troughs, and for all the manufacturing work which cities inevitably attract. For these various purposes—domestic, industrial, ornamental, and sanitary—a daily supply of from 200 to 300 gallons per capita should be provided, the amount varying with the size, situation and other conditions of the city, and remembering that the less the population the larger the amount per head required.

The purity of all contiguous waters, of ponds, rivers and lakes, needs also to be guarded; for the water so necessary to health, may hide in it the germs and sources of infection. The pond which serves as the cemetery for dead cats and dogs, and as the cess-pool for all neighboring filth, is a Dead Sea of disease and death. Its very power of absorption makes it the hiding place of noxious gases, and the breeding ground of all miasmatic germs and influences. Even the subterranean water beds, and the wells which penetrate them, need to be watched and guarded by proper drainage.

#### *Food Supplies:*

In general, people must win and choose their own bread and meat; but it is too obvious to need argument, that the food supplies of cities must come from a distance, and the larger the city the greater the distance. In the long transportation decay begins its work and incipient disease is engendered. Cupidity, fearing loss, conceals as best it can the damaged and tainted character of the meats and fruits it offers for sale, or tempts the poor, by a cheaper price, to buy and use its unwholesome viands. Adulteration comes to add its deceits and dangers, and the poor denizens of the city homes are beset with dangers in almost every dish which appears upon their tables. A thorough system of public inspection by competent, vigilant, well-paid and well-watched inspectors may ward off much of the danger, but the remedy should begin back of that, in a well chosen location of the abattoirs and slaughter houses in a healthful situation, where the animals destined for slaughter may have ample yards and a supply of food and water, and where the meat may be free from tainted, and germ-bearing air; and in the proper location and construction of the market houses, to allow them to be kept clean and sweet, free from all decaying animal or vegetable substances, and from all taint of pollution and disease. The best food material may be spoiled in a few hours by the absorption of filth from a polluted and poison-loaded atmosphere. Cities must meet with due care the artificial conditions which compel

them to bring their food from such wide areas, or the ruined health and the scourging epidemic will surely punish their neglect. Let it not be said, "our fathers did not care for all these things and they lived without fear or harm." They lived till they died: and the low average of life in their generations shows that the many died before their time and of preventable diseases. The history of the past gives no argument for the neglect of sanitary measures.

### *Public Buildings:*

The city is the home of crowds. A great orator, singer, player or preacher, easily fills churches, halls or theaters with the dense masses of breathing human beings. Schools, courts, and all public assembly rooms are liable to be filled with daily crowds; and no deadlier foe to health and life can be found than the breath-poisoned atmosphere of a crowded room. Stringent ordinances in every city ought to forbid the erection of any public hall, theater, church, school house, or other building for public assemblies, till the plans are inspected and approved by competent sanitary authorities. It is a gross neglect of public health to allow such death-traps to be opened, as are many of the popular halls and meeting rooms. No hall, school room, theater or church is safe in which the whole volume of air cannot be changed as often as once in every ten minutes, and in no case can this be accomplished where the two sides of the room, at least, are not outer walls, with abundant and large windows reaching nearly from floor to ceiling, and where at least one-tenth of the roof space cannot, in case of need, be opened for the escape of the breath-loaded and body-heated air. It is astonishing ignorance or stupidity which allows an over-greedy builder to add a third story to his building in the middle of the block, and and fit it up as a public hall for lectures and concerts, cutting off the front, perhaps, as offices, or the rear as dressing rooms. Let the city itself erect, on some public square, a public building, with ample halls large and small, to be let to societies or traveling troupes and lecturers, in which the public health and safety can be fully cared for. If private parties can provide such halls at a profit, certainly a city can afford to supply them and take their revenue. If the city outgrows the one, let it add others at convenient points; and if it will provide in these public buildings, rooms for its offices, for public libraries, museums, scientific and art collections, for evening schools and lecture courses, it will help at once the civilization and sanitation of its citizenship. If cities must exist; if people will crowd together in great multitudes to live along the sides of narrow streets, and throng the public places, they must needs take care, at whatever expense, of that priceless but perishable good, bodily health.

While our young cities are eager and alert to attract trade and population, while they welcome capital and business, and pay bounties even for the incoming of manufactories and their crowds of operatives, let them not begrudge the expenditures to provide for the preservation of this mass of busy life and strength. Let them remember that the epidemic which they tempt is the most relentless of tax-gatherers. The contagions love cities as their warmest breeding places and richest harvest fields, and the health enfeebled

by public parsimony falls an easier prey to the fiery plague, and falls as fuel which feeds the flame and speeds its march. Save to-day your taxes for public health, and to-morrow, or within the year, they will be demanded of you four-fold for wasted health, for the buried dead, or for the business ruined by the epidemic scare of fever or of plague.

### *The City Board of Health:*

An efficient board of health, with a good competent health officer, with all needful rules and facilities for the quarantine and care of those who are suffering from contagious diseases, has also a place, and a place of indispensable importance in the sanitary requirements. In the case of invasion by contagious disease, the prompt action of a board of health, with ample and recognized powers, is the only security against infinite disaster and distress. But a true board of health will not be merely a "life-saving service," for the occasion of a storm; it will be also the lighthouse to warn of danger and show the path of safety. The police board, that watches against crime and defends property, renders a more obvious, but not a more valuable service than the health board which watches against the more wasteful desolations of disease, and guards life itself from the stealthy assault of assassins that lurk in the tainted air, and breed in neglected sewers and cess-pools.

The members of this important board should be chosen, first, for their competency, not simply as physicians, but as sanitarians; and, second, for their energy and activity in public good. And thus chosen, they should be given ample authority to forbid nuisances in building and in business; to quarantine and control in contagions and epidemics; to placard all places of danger, and to provide for the public health. Even despotism may be endured when the alternative lies between despotism and destruction.

### *Conclusion:*

Other provisions of city sanitation may easily be noticed by the thoughtful and the expert, but with the fulfillment of those already named the others will be readily seen and met as they rise. The health of our State depends largely upon the health of its cities—those storm-centres of infection and epidemics. The sanitation of its cities will raise, by natural consequence, the better sanitation of its country homes and thus of the whole people.



# REGULAR QUARTERLY MEETING,

OCTOBER, 1883.

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HELD in the office of the BOARD, in the State House, at Springfield, October 5, 1882. Present: Drs. Bateman, Ludlam, Clark and Rauch. Dr. Bateman presiding in the absence of the President.

After the reading and approval of the minutes of the last meeting, the Secretary submitted the following

## QUARTERLY REPORT.\*

At the date of last report, June 30, there had been a total of 190 cities, towns and villages in which small-pox had appeared since November 1, 1881, of which number twenty-two had occurred in the preceding quarter, and there were still cases remaining at nine points. Since then there have been cases at Paxton, in Ford county, near Prairie du Rocher, in Randolph county, and on an island in the Mississippi river opposite Harrisonville, Monroe county. The disease has also been re-introduced into Jersey county through a suit of second-hand clothes bought in St. Louis.

The Paxton cases originated with a stock-dealer and importer of horses, who contracted the disease en route from France in the stock-boat Friga, on board of which was a mild case of varioloid. The boat, it is said, escaped inspection at quarantine in New York, and as Hefner, the importer, did not travel on an immigrant train in this country, he also escaped the inspection service. The disease was confined to Hefner's house, but his wife, son and daughter were attacked, and the son died.

The Monroe and Randolph county cases are believed to have originated from an infected mattress, supposed to have been thrown into the river and washed ashore on Staton's Island.<sup>†</sup> Owing to failure of prompt recognition of the disease, a hired man who had been exposed was allowed to go to Randolph county, near Prairie du Rocher, where, together with himself, there have been in all nine cases, with five deaths. The disease seems to have been of a very mild type on Staton's Island, no deaths occurring out of the ten cases.

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\* Presented in detail, as fairly illustrative of the work in the Secretary's office.

<sup>†</sup> Subsequently ascertained that the contagion was brought from Springfield, Mo. See Appendix.

It is worth while calling attention, in this connection, to the markedly different results obtained in counties under township organization and in those where, in the absence of town boards, the county commissioners are charged with the duties of health authorities. While, of course, the most efficient work is done and the disease is most promptly "stamped out" in localities where there are regularly organized boards of health, it is yet true that, as a rule, the town boards have been only less efficient, and the disease has been generally promptly mastered by their efforts. On the other hand, in counties where the county commissioners alone have charge, there has, as a rule, been delay in action or neglect, resulting in a spread of the contagion beyond the first cases or families and an undue prolongation of the disease. In Alexander county, for example, the first case near Commercial Point occurred in the latter part of April, and the contagion was not finally eradicated until the 20th of July. The recent outbreak and spread in Monroe and Randolph counties, are, to some extent, due to similar causes.

At this date there is one remaining case near Prairie du Rocher, and three in the hospital in Chicago. Aside from these, there are no cases known to exist in the State at present.

The decline of the epidemic in Chicago since the inauguration of the Immigrant-Inspection Service is clearly shown in the following table:

Month.	Cases reported...	Deaths.....	Remarks.
April .....	321	95	Inspection began June 1.
May .....	281	65	
June .....	151	29	Average decline before inspection ..... 12 per cent.
July .....	44	11	
August .....	24	5	Average decline since inspection ..... 78 per cent.
September .....	7	3	

#### *Immigrant-Inspection Service:*

The members of the BOARD have been supplied from time to time with my reports, as Supervising Inspector of the I.-I. S. in the Western District, to the Secretary of the National Board of Health, and it will, therefore, only be necessary, in this connection, to present a summary of the work done up to the close of the quarter, September 30, 1882, which is as follows:

Immigrants arriving and inspected over the P., Ft. W. & C. R. R., 14,825, of which number 12,676 were more or less perfectly protected, while 2,149 were found to need vaccination or revaccination.

Over the L. M. & M. S. R. R., arrived and inspected, 11,402; protected, 9,332; requiring vaccination or revaccination, 2,020.

Over the Michigan Central, 19,131; protected, 14,026; requiring vaccination or revaccination, 5,105.

Over the Grand Trunk, 8,237; protected, 6,486; requiring vaccination or revaccination, 1,751.



Over the Baltimore and Ohio Railroad, 8,193; protected, 6,418; requiring vaccination or revaccination, 1,745.

Passing the Indianapolis station for points west, 10,413; protected, 9,500; requiring vaccination or revaccination, 823.

Crossing the Mississippi at St. Louis, 6,785; protected, 6,440; requiring vaccination or revaccination, 345.

From the foregoing it will be seen that of the total 78,986 immigrants who have arrived in or passed through this district since the 1st day of June, nearly 14,000 were susceptible to small-pox, and capable of conveying and propagating the contagion throughout the vast region of the Northwest. As has been before remarked, the Service is not only a protection to Illinois, but to the entire western region beyond, north to Minnesota and south to Texas.

During the season nine cases of small-pox and varioloid have been detected and removed from trains before reaching the State, and within three weeks one case was removed to the Chicago small-pox hospital by the inspector, and four others were properly cared for by the St. Louis inspector. The former patient was destined for Neenah, Wis., and the latter (a party of Bohemians) for Missouri.

#### *Vaccination of School Children :*

During the last ten days of the quarter, there have been distributed between 18,000 and 19,000 copies of a circular letter (No. 112) calling attention to the necessity of perfecting and perpetuating the results of the School-Vaccination Order of the BOARD, issued in December last. A copy of this circular has already been sent to each member of the BOARD, so that it is probably unnecessary to add anything more on this subject.

There will be sent out within a few days, 17,500 copies of the Vaccination Return, Form 52, and some 80,000 Vaccination Certificates, Form 51, these amounts being still on hand from last winter's supply.

It may be incidentally remarked that the necessity for this effort on the part of the BOARD, to protect the public-school interests of the State, will receive very striking proof in the forthcoming history of the small-pox epidemic of 1881-2, and in the tabulation of the returns of vaccination from the various schools. It is almost incredible that so large a percentage of unvaccinated children should have been found as these will show.

Even in Chicago, the tabulation of which has been completed since the last meeting, a much greater number of imperfectly protected children were found than was anticipated.

The returns from Cook county alone, including Chicago, have occupied fully three months in tabulating. The amount of time required for this work will probably render it impracticable to tabulate in such detail the returns from the entire State, but the salient points, at least, will be collated in due season.

*Vital Statistics :*

During July the form for the condensed return of deaths, with its accompanying pamphlet of instructions and list of synonyms, was distributed to the county clerks. There was also sent to each a blank (No. 191) on which to return the totals of marriages, births and deaths, for the years 1878 to 1890, inclusive, Form 90 being reserved for deaths during the year 1891 only.

Up to date, complete return for the four years have been received from 73 counties, embracing 876 separate returns. From the remaining 29 counties there have been received 179 returns, and it is anticipated that before the tabulation of those now in hand is completed full returns will have been received from all but less than half a dozen counties.

From such examination of these returns as I have, thus far, been able to make, it is very apparent that there is not the degree of attention paid to the law concerning the registration of vital statistics, either on the part of physicians or county clerks, that a commonwealth of the general intelligence of Illinois should exhibit. Something of this is due, no doubt, to the BOARD itself, which has hitherto been prevented, by want of means and pressure of other duties, from giving the subject the necessary attention; but it is, also, largely the result of causes which are believed to be now susceptible of remedy at little cost.

I think it would be well that the BOARD call the attention of county commissioners to the importance of this work, to the law requiring it, and to the necessity of making proper clerical provision for its execution. Owing to the want of such provision, to failure to comprehend the character and practical utility of the work, and, in not a few instances, to ignorance of the legal requirement, the difficulty, labor and expense of securing the returns have been very considerably enhanced to the BOARD. Over 500 communications have been sent out on this one subject alone during the past six weeks. This, of course, should be entirely unnecessary in a matter which the law distinctly says the county clerks shall attend to annually.

Litigation, growing out of the want of just such data, frequently costs a county and private individuals more, in a single year, than would defray the expense of their collection for a number of years.

*Burial-Permit Ordinance :*

Of the circular letter and draft of an ordinance concerning burial permits, authorized to be printed and distributed, there have been 744 copies sent to various persons interested. Its reception has been quite satisfactory, and letters are now being received in almost every mail announcing the adoption of the ordinance, or making inquiry concerning it. A form of permit has been prepared and sent out as a guide to the officer charged with its issue. This has a counter-foil or stub attached, which being retained, may constitute the "suitable book" prescribed in section 4 of the ordinance. The expense is slight, and the form will answer very well for the smaller towns. For other places, the book used by county clerks as a register of deaths may be used, and this can be obtained at an expense of from \$5 to \$10 per copy, according to the number of pages.

Among the cities and towns which have already adopted the ordinance are Bloomington, Morris, Peru, Delavan, Pekin, Lemont, Girard and Canton.

Its importance, as a foundation for a very necessary class of sanitary work, can hardly be over-estimated, and I consider it one of the most satisfactory recent undertakings of the Board.

One of its valuable results will be to facilitate the collection of vital statistics—a matter which, as shown in another section of this report, is, at present, very far from perfect.

#### *Prevalent Preventable Diseases:*

An examination of the returns of causes of death during the past year reveals an undue prevalence of such more or less preventable diseases as typhoid fever, scarlet fever and diphtheria.

While such striking results may not be looked for in any attempts at the suppression and prevention of these diseases as in small-pox, still, enough is known of their origin, mode of propagation and the measures which have proven most successful in combating their spread, to warrant the Board in some effort toward popular education regarding such measures.

I would suggest that a committee be appointed to prepare a circular of instruction concerning the prevention of these three formidable diseases.

#### *Local Boards of Health:*

A number of local boards of health have recently been organized in the State, and, in many instances, have already done effective work. The want of a uniform code of sanitary ordinances is, however, seriously felt by these organizations, and hampers their influence.

I suggest that a committee of this Board be appointed, which, with the Attorney General, shall prepare such a code, and that the Secretary be authorized to distribute it, as soon as completed to the satisfaction of said committee, without awaiting further action by the Board.

#### *Opposition to Vaccination:*

That much discredit has been thrown upon vaccination from causes entirely foreign to the operation itself, is well understood. To a very great extent the opposition to the measure is due to these causes, and the anti-vaccinationists buttress their so-called arguments with alleged facts which, on investigation, are found to belong to the *post hoc* category. A child is vaccinated with a dirty lancet; or with virus containing pus globules, epithelial scales, red corpuscles, or other foreign matter; or while suffering from some cutaneous disease; or, being neglected afterward, is exposed to wet, cold or local irritation and in consequence suffers from a train of untoward symptoms which would as surely follow any simple abrasion under like conditions. Straightway the case is used to illustrate the risks, dangers and pernicious effects of vaccination. One or two such instances in a community have been known to arrest the progress of vaccination, and to cause an excitement only less harmful than an outbreak of small-pox itself.

The experience of the past year, the data already accumulated by the BOARD, and the desirability of removing any objection to a measure so beneficent, suggest the propriety of preparing a plain, simple circular of specific instructions concerning the selection of virus, the mode of performing the operation, the care to be exercised as to physical condition of the subject, and the precautions to be observed during the vaccinal disturbance. Such a circular, while addressed to the laity, would not be without value to the physician himself, and I recommend the appointment of a committee for its preparation.

### *Medical Practice Act:*

During the quarter, certificates have been issued to 90 graduates on recognized diplomas, and 2 to non-graduates on length of practice.

There have also been six certificates issued to midwives, and there are still remaining in the office the papers of sixteen others to whom certificates will issue as soon as these are returned with the necessary signatures of members.

In looking over the results accomplished under the Medical Practice Act, I have been much impressed by the marked change in the proportions of non-graduates to graduates. When the law went into effect in 1877, the best sources of information gave an excess of non-graduates over graduates, while to-day the proportion is less than one of the former to five of the latter.

Very many of our licentiates to whom certificates have been issued upon examination, have complied with the request of the BOARD by subsequently attending lectures and graduating.

It would be well, I think, to authorize a communication addressed to all non-graduates under 45 years of age who are practicing under the 10-years' exemption clause, recommending their attendance at some reputable medical school and graduation therefrom. The same recommendation might also be made to those licentiates upon examination who have not yet conformed to the expressed wish of the BOARD.

With the present advancing standard of medical education, it will soon be difficult and expensive for members of these two classes to comply with the technical requirements of good schools, and there is a rapidly growing tendency to demand the higher qualifications of such schools, not only from applicants for places of trust and profit in the public services, but also from the profession generally by the public at large.

In this connection I am glad to be able to state that the reception of the BOARD's schedule of requirements for recognition of diplomas after the session of 1882-83, has been very generally satisfactory. The effect of this action will be by no means confined to the medical schools of our own State, or even those of immediately adjoining territory, but is already manifest in many of the Eastern colleges.

While preparing this report, the Cincinnati *Lancet and Clinic*, of Sept. 30, comes to hand, containing an editorial in which occur the following apropos passages:



Some States have done a good work in appointing boards of health and clothing them with power to regulate the practice of medicine. Such boards have accomplished much in freeing those States from the practice of unqualified men, both native and foreign.

These State Boards have directly elevated the standard of medical education in many ways. They say directly to the medical colleges: Unless you adopt and adhere to a far standard of educational and examination requirements we will not recognize your diplomas. While the State of Ohio has no State Board of Health or registration law, neighboring States having such laws have indirectly caused Ohio colleges to advance their requirements for graduation.

### *Office Work:*

Attempts to secure the returns of vital statistics from the county clerks, to promote the adoption of the burial permit ordinance, to perfect the history of the small-pox epidemic, and to complete the returns of the vaccination of public-school children, together with an unusual amount of routine correspondence, have swelled the office work for the quarter much beyond the average of that for the summer months usually in the absence of an epidemic.

The following figures indicate, to some extent, the character and amount of this work:

#### Received—

Communications, letters, etc.	1,890
Report of cases, small-pox epidemic, (Form 80)	1,321
Economic reports, small-pox epidemic, (Form 86)	63
Returns of vital statistics	1,055
School-vaccination returns	172
Registration of certificate returns	248

#### Sent—

Communications, letters, etc.	2,318
Printed circular letters	3,200
Official registers	992
Annual reports	221
Blanks—vaccination certificates	1,550
Blanks—vaccination returns	1,210
Blanks, vital statistics	1,403
Instructions, vital statistics	190
Burial-permit circular	744
Burial-permit ordinance	425
Burial-permit blanks	130
Immigrant-inspection reports	1,420
School-vaccination circulars	18,425

#### Certificates issued:—

To graduates	90
To non-graduates	2
To midwives	6

Of the above, 512 packages were sent by express at a cost of \$56.56, and the remainder by mail at a cost of \$105.08. There were also sent 43 telegrams and received 47—at a cost of \$25.06.

In addition to the foregoing work, there has been compiled a complete directory of the diploma-granting medical institutions of the United States and Canada, showing the organization, course of instruction and requirements for graduation of each of these bodies. This will be included in the annual report of the Board for 1881, now going through the press.

### *Action on the Secretary's Report:*

At the conclusion of the reading of the above it was referred to a special committee consisting of Drs. Ludlam and Clark. Dr. Clark was also added to the auditing committee.

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### AFTERNOON SESSION.

At 2 P. M. the minutes of the morning session were read and approved.

On motion of the Secretary, the Board went into executive session, at the conclusion of which the Secretary announced that the following orders had been made:

#### *Henry A. Lüders, of Collinsville:*

In the case of certificate No. 5,256, issued Nov. 1, 1881, to a man then residing in Chicago, lately at Collinsville, Madison county, and claiming to be Henry A. Lüders, a graduate of Göttingen University, that said certificate be revoked on the ground of fraud, it having been ascertained by the Secretary that the real graduate of that name died three years ago.

#### *Joseph Atherton, of Leland:*

In the case of certificate No. 4,732, issued Oct. 14, 1880, to Dr. Joseph Atherton, of Leland, LaSalle county, that the Secretary be authorized to revoke said certificate in his discretion.

A large number of other cases under the Medical Practice Act, involving a voluminous correspondence, were also considered, but with the foregoing exceptions were held under advisement.

Lüders' case seems worth presenting in detail:

On the 6th day of October, 1879, a man calling himself Dr. Henry A. Lüders presented a diploma of the University of Göttingen, to one of the members of the STATE BOARD OF HEALTH, in Chicago, for verification as required by law before a certificate is granted. The usual affidavit, with fee, was sent to the office at Springfield, but, owing to some informalities in the affidavit, and the want of letters of recommendation, no certificate was issued. The applicant was written to twice, and finally replied that he would in a few days send the required letters from prominent German physicians of Chicago. These not being received, after considerable delay, he was again written to, but the letter was returned from the Chicago postoffice "not called for."

A letter was then addressed to one of the physicians whom he had mentioned, who replied that he knew Lüders, but doubted whether he was legitimately entitled to the diploma he held. As there was a possibility that this doubt was the result of prejudice, the applicant was again written to on January 10, 1880. He finally replied, from St. Louis, on the 16th, requesting that the certificate be forwarded to him there, and enclosing a document, addressed to Peter Lüders, stating that his son Henry had attended two courses of lectures, in 1865-66, at the University of Göttingen, and was a diligent student. In refusing the request to forward him a certificate to St. Louis, the history of the matter up to this time was briefly cited, and he was advised that he must clear up the doubts as to his graduation, and furnish the necessary letters of recommendation before a certificate could be granted to him.

In response to this, he forwarded, on the 20th of January, 1880, a diploma issued to Heinrich Andreas Lüders, on the 15th of May, 1866, by the University of Göttingen; and further stated that he could not furnish letters of recommendation, owing to his want of professional acquaintance in this country, but hoped the certificate would be issued to him at once, while he would write to Germany for the necessary letters.



An examination of the diploma showed it to be a genuine document, duly signed and sealed; but the atmosphere of doubt which had gradually enveloped the case, caused the Secretary to reply that he had no authority to issue a certificate until the letters of recommendation were received; that if the applicant knew no professional men in the United States, it would be necessary to wait until he could obtain letters from Germany, adding that "the BOARD had been already imposed upon by men who were graduates, but who turned out to be professional scoundrels."

To this letter no reply was received, and nothing more was heard of "Dr. Lüders," until October, 1881, when he wrote (on the 15th,) from Collinsville, in Madison county, inclosing letters of recommendation purporting to be from reputable practitioners, and asking that the certificate be sent to him at once, as he proposed to practice in Collinsville.

A certificate was finally issued to him on November 1, 1881—over two years after his first application—but even now with some hesitation, notwithstanding the presentation of a genuine diploma from "a medical institution in good standing," a certificate of attendance upon lectures, and endorsements as to moral and professional character.

The certificate of the BOARD and his unscrupulous methods enabled Lüders to obtain considerable practice in Collinsville; but his steady avoidance of the medical men of the place, together with the stories which were circulated concerning his practice, aroused suspicion, which was further strengthened by the discovery that he was receiving letters under another name.

This suspicion was finally proved well-founded by the receipt of a letter by Charles P. Ochsner, of Collinsville, who had written to the dean of the medical faculty of the University at Göttingen, inquiring concerning the diploma of Dr. Lüders. Prof. Leber, the dean, replied that Heinrich Andreas Lüders, of Riffenbrück, in the Duchy of Braunschweig, after completing his literary studies at the University of Erlangen, was graduated in medicine from the University of Göttingen, on the 15th of May, 1866; that he returned to his native place, Riffenbrück, where he practiced his profession until his death, in November, 1878, being then about 39 years old; and that the diploma presented to the ILLINOIS STATE BOARD OF HEALTH must have been fraudulently obtained, and the possessor was undoubtedly an imposter.

Meanwhile occasion had been found to caution some of the correspondents of the BOARD concerning the fellow, and when the statements of Prof. Leber were communicated to the Secretary, it was determined to make an example of him. It was decided to prosecute him for felony under the 13th section of the Medical Practice Act; but in order to do this successfully it was deemed advisable to secure the diploma as evidence. Unfortunately, before this could be done, the sham doctor took the alarm and left for parts unknown two days before the Secretary's arrival in Collinsville.

It has since been learned that his proper name is Lambrecht, and that he is a barber by trade; but how he became possessed of the real Dr. Lüders' diploma and other papers has not yet been ascertained. The letters of recommendation which he finally forwarded are pronounced forgeries.

He appeared at one of the colleges in Cincinnati during the session of 1882-3; but, upon publication of the above facts and of the BOARD's action in revoking his certificate, he was identified, and soon thereafter disappeared.

### *Report of Committee on Secretary's Recommendations:*

The committee to which was referred the Secretary's quarterly report submitted the following:

MR. CHAIRMAN: The committee appointed to consider the various subjects discussed, and suggestions and recommendations made in the quarterly report of the Secretary, beg leave to state that, having duly considered the same, they regard the several suggestions therein contained as timely and wise, and recommend their approval and adoption by the BOARD.

A. L. CLARK,  
R. LUDLAM.

The following committees were then appointed in accordance with the Secretary's recommendations, on the subjects mentioned:

On Prevalent Preventable Diseases—John H. Rauch, John McLean, R. Ludlam, A. L. Clark, W. A. Haskell.

On Sanitary Code—Newton Bateman, John M. Gregory, John H. Rauch.

The communication to county commissioners and the circular on vaccination suggested in the Secretary's report were also authorized.

At 4:30 P. M. the Board adjourned to pay its respects to the Governor, meeting again at 7 P. M. for the informal consideration of sundry matters connected with the Medical Practice Act and with the current sanitary work.

At 10 P. M. the auditing committee reported that it had examined the various accounts submitted, and had found the same to be correct. Adjourned.

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# FINANCIAL STATEMENT

## OF THE

# ILLINOIS STATE BOARD OF HEALTH

### FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 1882.

STATE BOARD OF HEALTH, <i>Dr.</i>			
To State Treasurer:			
Amount of regular appropriation, July 1, 1881 .....	\$5,500 00		
Amount of special appropriation (contingent epidemic fund).....	5,000 00		
To Treasurer of the Board:			
Unexpended balance on hand October 1, 1881* .....	172 51		
Fees and other receipts during the year .....	598 00		
			\$11,270 81
STATE BOARD OF HEALTH, <i>Cr.</i>			
By payment on all accounts, as per itemized statement .....	\$9,141 87		
Unexpended balances remaining in State Treasury .....	1,907 73		
Unexpended balance in the hands of the Treasurer .....	220 91		
			\$11,270 81

## ITEMIZED STATEMENT OF EXPENDITURES

OF THE

ILLINOIS STATE BOARD OF HEALTH, FOR THE FISCAL YEAR ENDED  
SEPTEMBER 30, 1882.

Salary of Secretary .....	\$2,500 00		
Clerical services .....	3,550 50		
Traveling expenses of Board and Secretary† .....	1,114 25		
Postage .....	498 53		
Expressage .....	359 80		
Telegrams .....	150 85		
Stationery and printing .....	302 20		
Medical journals, books and papers .....	171 07		
Rent, Chicago office .....	105 00		
Office furniture .....	31 35		
Fees returned .....	7 00		
Legal services .....	60 00		
Messenger and janitor .....	48 00		
Sundries .....	81 82		
Vaccine virus .....	158 50		
			\$9,141 87
Total expenditures from regular appropriation .....	\$5,486 85		
— — — contingent epidemic fund .....	3,105 42		
— — — fees and other receipts .....	549 60		
			\$9,141 87

\* At the date of the Treasurer's last report (see page xxvii, Fourth Annual Report,) the balance on hand was \$157 51; but out of this there was subsequently paid \$285 00 for indebtedness incurred in the fiscal year ended September 30, 1881—as shown in the Treasurer's report hereto appended. This left \$172 51 the net balance in the Treasurer's hands, available for the fiscal year 1881-82.

† Including amounts paid for postage, express charges, railroad fares, hotel bills, and all other expenses incidental to the meetings of the Board.

## REPORT OF THE TREASURER

OF THE

## ILLINOIS STATE BOARD OF HEALTH FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 1883.

*To the President and Members of the Illinois State Board of Health:*

GENTLEMEN:—Your treasurer begs leave to present the following report of the receipts and expenditures of his office for the period commencing with the date of his last annual report, October 1, 1881, and ended September 30, 1882.

## GENERAL ACCOUNT—DR.

		Balance on hand to credit of general account, Sept. 30, 1881.....	.....	\$457 51
1881	April 1	Received of Dr. J. H. Rauch, office receipts for October.....1881	\$38 00	
		“ “ “ “ November.....1881	35 00	
		“ “ “ “ December.....1881	20 00	
		“ “ “ “ January.....1882	25 00	
		“ “ “ “ February.....1882	24 00	
		“ “ “ “ March.....1882	69 00	
1882	Sept. 1	“ “ “ “ April.....1882	151 00	
		“ “ “ “ May.....1882	63 00	
		“ “ “ “ June.....1882	61 00	
		“ “ “ “ July.....1882	48 00	
		“ “ “ “ August.....1882	29 00	
		“ “ “ “ September...1882	54 00	
				598 00
		Total.....		\$1,055 51

## GENERAL ACCOUNT—CR.

		Paid by order of the BOARD.....		\$834 60
1881	Oct. 15	F. E. Taliaferro, clerical services, July, August, September, 1881.	\$215 00	
		H. A. Weber, chemical analysis, August, 1881.....	25 00	
1882	April 14	Dr. J. H. Rauch, office expenses, for October, 1881.....	11 50	
		“ “ “ “ November, 1881.....	18 80	
		“ “ “ “ December, 1881.....	7 60	
		“ “ “ “ January, 1882.....	16 80	
		“ “ “ “ February, 1882.....	33 45	
		“ “ “ “ March, 1882.....	37 44	
		Isham & Prentice, rent Chicago office, July, 1881, to February, 1882, inclusive.....	120 00	
		J. J. Stiles, legal services.....	60 00	
		State Journal Printing Co.....	22 25	
Sept. 30		Dr. J. H. Rauch, office expenses, for July, 1882.....	56 85	
		“ “ “ “ August, 1882.....	95 55	
		“ “ “ “ September, 1882.....	84 36	
		Isham & Prentice, rent, Chicago office, March, April, May, 1882.....	30 00	
		Balance in my hands, September 30, 1882.....		\$834 60
				220 91
				\$1,055 51

All of which is respectfully submitted.

A. L. CLARK, M. D., Treasurer.

Audited and approved:

NEWTON BATEMAN, { Auditing Committee.  
R. LUDLAM, {

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MEDICAL EDUCATION  
AND THE  
REGULATION OF THE PRACTICE OF MEDICINE  
IN THE  
UNITED STATES AND CANADA.

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ILLINOIS STATE BOARD OF HEALTH, 1883.





MEDICAL EDUCATION  
AND THE  
REGULATION OF THE PRACTICE OF MEDICINE.

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IN June, 1880, the ILLINOIS STATE BOARD OF HEALTH appointed a committee to formulate a Schedule of Educational Requirements and Characteristics, by which to determine the good standing of medical colleges. This step was taken in order to enable the BOARD the better to discharge the duty devolved upon it by the Act to Regulate the Practice of Medicine in the State of Illinois; and by which Act the BOARD is directed to "issue certificates [entitling to practice] to all who furnish satisfactory proof of having received diplomas or licenses from legally-chartered medical institutions in *good standing*."

The following Schedule was prepared by the committee, and subsequently formally adopted by the BOARD, as the standard entitling to recognition, as the basis of legal qualification for practice in Illinois, any diploma *issued after the session of 1882-83*:

MINIMUM REQUIREMENTS FOR A MEDICAL COLLEGE TO BE HELD IN  
"GOOD STANDING."

I. CONDITIONS OF ADMISSION TO LECTURE COURSES.

1. Credible certificates of good moral standing.
2. Diplomas of graduation from a good literary and scientific college, or high school. Or, lacking this,
3. A thorough examination in the branches of a good English education, including mathematics, English composition, and elementary physics or natural philosophy.

II. BRANCHES OF MEDICAL SCIENCE TO BE INCLUDED IN THE COURSE OF  
INSTRUCTION.

1. Anatomy. 2. Physiology. 3. Chemistry. 4. Materia Medica and Therapeutics. 5. Theory and Practice of Medicine. 6. Pathology. 7. Surgery. 8. Obstetrics and Gynecology. 9. Hygiene. 10. Medical Jurisprudence (Forensic Medicine).

## III. LENGTH OF REGULAR OR GRADUATING COURSES.

1. The time occupied in the regular courses or sessions from which students are graduated shall not be less than five months, or twenty weeks each.

2. Two full courses of lectures, not within one and the same year of time, shall be required for graduation with the degree of Doctor of Medicine.

## IV. ATTENDANCE AND EXAMINATIONS OR QUIZZES.

1. Regular attendance during the entire lecture courses shall be required, allowance being made only for absences occasioned by the student's sickness, such absences not to exceed twenty per centum of the course.

2. Regular examinations or quizzes to be made by each lecturer or professor daily, or at least twice each week.

3. Final examinations on all branches to be conducted, when practicable, by competent examiners other than the professors in each branch.

## V. DISSECTIONS, CLINICS AND HOSPITAL ATTENDANCE.

1. Each student shall have dissected during two courses.

2. Attendance during at least two terms of clinical and hospital instruction shall be required.

## VI. TIME OF PROFESSIONAL STUDIES.

This shall not be less than three full years before graduation, including the time spent with a preceptor, attendance upon lectures, or at clinics and hospital.

## VII. INSTRUCTION.

The college must show that it has a sufficient and competent corps of instructors, and the necessary facilities for teaching, dissections, clinics, etc.

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Hereafter, diplomas of colleges whose educational requirements and methods fall below the above Schedule, will not be recognized as entitling their possessors to certificates from the ILLINOIS STATE BOARD OF HEALTH. This does not, however, affect the value of diplomas issued prior to the session of 1883-84.

THE following named institutions are not recognized by the ILLINOIS STATE BOARD OF HEALTH:

- American Eclectic Medical College*, Cincinnati, Ohio.
- American Health College*, Cincinnati, Ohio.
- American University*, Philadelphia, Pa.
- Bellerue Medical College of Massachusetts*, Boston, Mass.
- College of Physicians and Surgeons*, Buffalo, New York.
- College of Physicians and Surgeons*, Milwaukee, Wis.
- Eclectic Medical College of Pennsylvania*, (late issues).
- Edinburg University*, Chicago, St. Louis, and elsewhere.
- Excelsior Medical College*, Boston, Mass.
- First Medical College of the American Health Society*, Boston, Mass.
- Hygeo-Therapeutic College*, Bergen Heights, N. J.
- Hygeo-Therapeutic College*, New York City.
- Joplin Medical College*, Joplin, Mo.
- Livingston University*, Haddonfield, N. J.
- Medical Department of the American University of Boston*, Boston, Mass.
- New England University of Arts and Sciences*, Boston, Mass.
- New England University of Arts and Sciences*, Manchester, N. H.
- Penn Medical University*, Philadelphia, Pa.
- Philadelphia University of Medicine and Surgery*, Philadelphia, Pa.
- Physio-Eclectic Medical College*, Cincinnati, Ohio.
- Physio-Medical College*, Cincinnati, Ohio, (late issues).
- St. Louis Eclectic Medical College*, St. Louis, Mo.
- St. Louis Homeopathic Medical College*, St. Louis, Mo.
- United States Medical College*, New York City.

In addition to the foregoing, there are a number of institutions concerning the "good standing" of which the BOARD has not yet been called upon to decide. The standing of any medical college may, however, be readily determined—for the purposes of the Illinois Medical Practice Act—by comparing its curriculum of study and requirements with the Schedule of the BOARD above set forth.

Students intending to practice in Illinois, will do well to make this comparison for themselves. Unless their diplomas are from colleges in "good standing," as thus defined, the only other method of entering practice in this State, under the law, is by passing a satisfactory examination before the BOARD.

The Schedule of the ILLINOIS BOARD was adopted by the Missouri State Board of Health at its meeting in St. Louis, August 1, 1883, and will be adopted by the Minnesota State Board of Medical Examiners at their next meeting (fall of 1883).

THE Directory of Institutions granting Medical Diplomas or Licenses in the United States and Canada, which was published in

the last annual report, has been revised, enlarged, and brought up to the dates of the various announcements for the session of 1883-84.

Prefacing the College Directory of each State will be found a compendium of the laws regulating the practice of medicine therein, together with comments by correspondents of the BOARD. Various other data, statistics, etc., have been added, with the view of increasing the usefulness of this contribution to the history of Medical Education in this country.

A full summary and analysis will be found at the end of the Directory.

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# MEDICAL LAWS AND INSTITUTIONS

IN THE

## UNITED STATES AND CANADA.

### ALABAMA.

Population, 1,262,505.\* Number of physicians, 1552.\* Number of inhabitants to each physician, 813.

AN ACT to Regulate the Practice of Medicine in the State of Alabama.

Be it enacted by the General Assembly of Alabama:

SECTION 1. That no person, except those proposing to practice some irregular system of medicine, shall be permitted to practice medicine in any of its branches or departments as a profession and means of livelihood in this State, without having obtained a certificate of qualification from some authorized board of medical examiners, as hereinafter provided.

§ 2. That no person shall be permitted to practice any irregular system of medicine in any of its branches or departments as a profession or means of livelihood, in this State, without having obtained a diploma or certificate of qualification in anatomy, physiology, chemistry and the mechanism of labor from some authorized board of medical examiners, as hereinafter provided.

§ 3. That the Board of Censors of the Medical Association of the State of Alabama, organized according to the constitution of the said Medical Association of the State of Alabama, which was adopted at its annual meeting at the city of Tuscaloosa, in March, 1883, and the boards of censors of the several county medical societies which are in affiliation with the said Medical Association of the State of Alabama, and organized in accordance with the provisions of the constitution just mentioned, be and are hereby constituted the authorized Boards of Medical Examiners referred to in the first section of this act.

§ 4. That the standard of qualifications required of persons desiring to practice medicine in this State, together with the rules for the government of the authorized boards of medical examiners, shall be such as may be determined from time to time by the said Medical Association of the State of Alabama, in accordance with the provisions of its said constitution of 1873.

§ 5. That every diploma or certificate of qualification authorizing any person to practice medicine in this State, which shall be issued by any authorized board of medical examiners, shall be presented to the probate judge of the county in which said person resides, who shall officially endorse the same, and seal it with the seal of the county, and who shall also cause a full and fair copy of the same to be made in a well-bound book to be kept for that purpose, and called the register of licensed practitioners of medicine, and for this service he shall be entitled to a fee of one dollar: *Provided*, that said Medical Association, nor any board of censors in affiliation with it, shall be allowed to charge any fee for any diploma or certificate of qualification which may be granted by it.

§ 6. That any person practicing medicine in this State in violation of any of the provisions of this act shall be guilty of a misdemeanor, and, upon conviction thereof before any court having competent jurisdiction, shall be fined in the sum of not more than one hundred dollars for every such offense; and if the fine so imposed be not immediately paid, said person shall be imprisoned in the county jail for not more than one year for every such offense.

§ 7. That all persons who shall be legally engaged in the practice of medicine in any county of this State, before the organization of the board of medical examiners of said county, all persons who at any time have been legally engaged in the practice of medicine in this State, and who are now authorized to practice medicine in this State, shall be entitled to the certificate of the board of medical examiners, and to be inscribed in the register of licensed practitioners of medicine without examination as to qualification.

\* Where not otherwise specified, the figures of population and number of physicians are those given in the U. S. Census, 1880.

§ 8. That the provisions of this act shall take effect in any county of this State whenever the board of medical examiners for said county shall have been organized, as heretofore provided, and the fact of such organization officially communicated to the probate judge of said county by the board of censors of the Medical Association of this State.

§ 9. That none of the provisions of this act shall apply to females who now or may hereafter be engaged in the practice of midwifery: *Provided*, said females practice no other branch or department of medicine.

§ 10. That all laws and parts of laws in conflict with the provisions of this act be, and the same are, hereby repealed, and this act shall be in force from and after its passage. Approved February 9, 1877.

Official authority is vested in the Board of Censors of the Medical Association of the State of Alabama. This board, elected by the Association, is composed of ten members, and controls the county boards of censors, which are elected by the county medical societies, and are composed of five members.

JEROME COCHRAN, M. D., President State Board of Censors, writes:

"The peculiarity of our system is that the diplomas of medical colleges confer no right to practice medicine in this State. Nothing does that except the certificate of one of our examining boards, based upon actual examination of the applicant.

"We have forty-three county boards and one State Board. The county boards examine graduates of reputable medical colleges only, diplomas, however, serving only as a means for getting before the board. The State Board alone examines non-graduates.

"A few years ago we used to have a good many non-graduate applicants, but, having learned that our examination means something, they have almost ceased to trouble us.

"The examinations are always partly written, and the county boards send these written examination papers up to the State Board; not that the board can reverse the action of the county boards in any case, but if we find them doing their work in an unsatisfactory way, we do not hesitate to censure them and to publish the censure; and if any county board should continue refractory, we could and would dissolve such board.

"The examination of graduates by our county boards is not a mere form. During the last year they reported 40 applicants examined, and six of this number rejected. But even so, five of them were censured for lax examinations.

"Our State Association has been disciplined into the cohesiveness and efficiency of a regular army. With us the organized medical profession is on guard in every county to prevent violations of the law; while at the same time the constant supervision of the State Board holds the county boards up to a high standard. \* \* \*

"All persons legally engaged in the practice of medicine in Alabama at the time of the passage of this act are continued in the enjoyment of that right under certain regulations. \* \* \*

"All persons proposing to begin the study of medicine are examined by the county boards of censors in English grammar and literature, general and United States history, elements of arithmetic, geometry, inorganic chemistry and physics."

#### MEDICAL COLLEGE OF ALABAMA.

Mobile, Ala. (Pop. 29 132.)

Organized in 1859. The college was closed during the war and re-opened in 1863. There were no graduates during the years 1862-'3, '4-'5, '6-'7 and '8. The faculty embraces eight professors, three adjunct professors, three lecturers, and two demonstrators.

**COURSE OF INSTRUCTION:** One course of twenty weeks' duration annually. Course extends over two years. Graded course of three years recommended but not required. Lectures embrace anatomy, physiology, chemistry, materia medica and general therapeutics, theory and practice of medicine, surgery, obstetrics and diseases of women and children, physical diagnosis and diseases of the chest, ophthalmology and otology, histology and microscopic examination of urine, hospital and out-door clinics, practical anatomy, one course. Weekly quizzes on anatomy and chemistry.

**REQUIREMENTS:** For admission, none. For graduation: (1) age, twenty-one years, (2) good moral character, (3) three years' study, (4) attendance on two full courses of lectures, (5) pass before the members of the faculty a satisfactory examination, (6) a thesis on some medical subject.

**FEES:** Matriculation, \$5.00. Lectures, including hospital, \$75.00. Dissecting, \$10.00. Graduation, \$25.00.

**STUDENTS:** No information received concerning the number of matriculates. Number of graduates, session of 1877-'78, 18; 1878-'79, 18; 1879-'80, 20; 1880-'81, 22; 1881-'82, 21; 1882-'83, 16.

**REMARKS:** The first four weeks of the lecture course are devoted to elementary topics, and attendance during this period is not compulsory.

#### MEDICAL DEPARTMENT SOUTHERN UNIVERSITY.

Greensboro, Ala.

Organized in 1872. Extinct; last session closed in 1880.

## ARIZONA.

Population 40 410. Number of physicians, 71. Number of inhabitants to each physician, 570.

### AN ACT to Regulate the Practice of Medicine in the Territory of Arizona.

Be it enacted by the Legislative Assembly of the Territory of Arizona :

SECTION 1. It shall not be lawful for any person to practice medicine, surgery or obstetrics, in this Territory, unless such person shall have obtained a diploma regularly issued by a medical college properly and lawfully organized, and in good standing at the time of the issue of such diploma, or unless such persons shall have obtained a license from a board of medical examiners legally existing at the time, and properly qualified to issue such license under the laws of the State, Territory or country where such board of examiners then existed. Such diploma or license must state that such person is qualified in the branches of that medical profession named in said diploma or license; provided, however, that a diploma or license that has been or that may hereafter be granted for a moneyed consideration or other article of value alone; and provided, further, that no diploma or license regularly issued, as hereinbefore stated, and which has been revoked or cancelled by the medical college from which it was issued, or by the act of the Legislature of any State or Territory within which the same was granted, shall not be considered a sufficient qualification under this act.

§ 2. Every person engaged in the practice of medicine, surgery or obstetrics, shall register in the county recorder's office of the county where he is practicing or intends to practice, in a book to be kept by the county recorder, his name, residence and place of birth, together with a true and correct copy of his diploma or license, as required by section 1 of this act. The person so registering shall subscribe and verify by oath or affirmation, before a person duly qualified to administer oaths, that the copy so registered is a true and correct copy of the original diploma or license in his possession, and that he is the identical person named in the original diploma or license, and that he has attended at least one full course of lectures in the medical college from which such diploma or license was issued, which affidavit is to be reduced to writing, and annexed to the copy required to be registered under the provisions of this act. The county recorder is to receive a fee of five dollars for each and every registration under this act, to be paid by the person so registering.

§ 3. Any person who has been in continuous practice of medicine, surgery or obstetrics in this Territory for five years previous to the passage of this act, is hereby authorized to pursue the same without compliance with the above sections.

§ 4. The provisions of this act shall not apply to persons who shall prescribe for the sick, or practice obstetrics in any town, village or settlement in which there is no regularly educated and licensed physician practicing.

§ 5. Any person violating the provisions of this act shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by a fine of not less than fifty nor more than one thousand dollars, or by imprisonment in the county jail not exceeding six months, or by both such fine and imprisonment.

§ 6. \* \* \* All acts in conflict with the provisions of this act are hereby repealed.

§ 7. This act shall take effect and be in force on and after May 1, 1881.

## ARKANSAS.

Population, 892 525. Number of physicians, 1892. Number of inhabitants to each physician, 124.

### AN ACT to Regulate the Practice of Medicine and Surgery in the State of Arkansas.

Be it enacted by the General Assembly of the State of Arkansas :

SECTION 1. That hereafter no person shall practice medicine and surgery, or medicine or surgery, as a profession, in this State, without first being registered as a physician or surgeon, in the office of the clerk of the county court of some county in this State.

§ 2. Each county clerk in this State shall keep in his office a well bound book, in which he shall register the names of all such persons as shall be lawfully qualified, as hereinafter provided, and who shall apply for registration as physicians and surgeons, or physicians or surgeons, with the date of such registration.

§ 3. That hereafter any person who may wish to practice as physician and surgeon, or either, in this State, shall be allowed to register as such, who shall file with the clerk of the county court of any county in this State a certificate of qualification signed by a majority of the county board of medical examiners of the county in which he or she offers to register: *Provided*, That no person shall be allowed to register as physician or surgeon until he or she shall have attained the age of twenty-one (21) years: *Provided further*, That any person living in a county in which no board is organized, may apply to a board of some other county, or to the State Board.

§ 4. That immediately after the passage of this act, the county judge of each county in this State shall appoint for his county a board of medical examiners, consisting of three persons, who shall be citizens of such county and learned in the sciences of medicine and



surgery, of good moral character, and duly registered under this act, who shall hold their offices until the first term of such county court, in the year 1882, at which time, and every four years thereafter, said board shall again be filled by appointment as above provided; and should a vacancy occur in said board at any time, the same shall be filled by appointment made by the county judge.

§ 5. That the members of said board shall, before entering upon the discharge of their duties, take the official oath prescribed by the constitution of this State. That at the first meeting of the members of such board, after they shall have been appointed, preparatory to the transaction of the business assigned them under this act, they shall organize by electing one of their members as president and another as secretary. The regular meetings of such board shall be held quarterly, at the court house of the proper county, on the first Mondays in January, April, July and October in each year, and when so assembled, said board shall faithfully and impartially examine all such persons as shall appear before them for such purpose, touching their qualifications to practice medicine and surgery, or either; and all such persons as shall satisfy such board of examiners, or a majority of them, that he or she is twenty-one (21) years of age, of good moral character, and duly qualified, in knowledge and capacity, to practice medicine and surgery, or either, shall receive from such board a certificate of qualification as physician and surgeon, or either physician or surgeon, as the case may be; which certificate shall entitle such person to registration under the provisions of sections two (2) and three (3) of this act: *Provided always*, That such physician or surgeon shall be registered in the same county in which he or she was examined, except as provided in section ten (10) of this act: *Provided*, That any person desiring to be examined at any other than the time of the regular quarterly meeting, shall notify the president of the board of such desire, whose duty it shall be to assemble the board as soon as practicable, and examine such applicant.

§ 6. That the county clerk shall give to every person registered under this act a certificate of registration, over his signature and official seal, and such certificate shall authorize any such person to practice as a physician or surgeon, or both, as the case may be, in any county in this State. That the clerk shall receive, as his fee for all services required of him under this act, in each case, the sum of one and a half dollars (\$1 50.)

§ 7. Any two members of said Board shall constitute a quorum for the transaction of all business, and each applicant for examination shall pay, in advance, to the Secretary, to be divided equally among the members of such board, the sum of six (6) dollars, which shall be their only compensation.

§ 8. Be it further enacted, That all physicians and surgeons, who have been continuously engaged in a reputable practice in this State for a period of five (5) years next before the passage of this act, shall not be required to undergo the examination herein provided for, but shall, upon satisfactory proof, before the county clerk, of such continuous practice, and the payment of the fee allowed that officer, be duly recognized. Females, who are now, or may hereafter, engage in the exclusive practice of midwifery, are exempted from the provisions of this act.

§ 9. That any person who shall prescribe or administer medicine for, or who shall in any manner treat diseases or wounds for pay, shall be deemed physicians and surgeons under this act.

§ 10. That immediately after the passage of this act, the Governor shall appoint a State Board of Medical Examiners, consisting of five members, learned in the sciences of medicine and surgery, and of good moral character, and duly registered, who shall organize in the manner prescribed for county boards by this act, and shall hold their meetings at such times and places as the President may direct, for the purpose of the re-examination of any person, at his or her request, who has been refused registration by any county board; and if, upon such re-examination, such person shall be found qualified to practice medicine or surgery, said State Board shall grant to him or her a certificate accordingly, which certificate shall entitle the person so receiving it to be registered as provided in this act, in any county in this State. Such applicant shall pay the State Board a fee of five dollars; *Provided*, That no person desiring to practice medicine under this act shall be excluded therefrom on account of any particular system or school of medicine that he may desire to practice.

§ 11. Any person who shall hereafter engage in the practice of medicine and surgery, or either, in this State, without being registered under this act, shall be deemed guilty of a misdemeanor, and upon conviction, in any court having jurisdiction under the laws of this State, shall be fined in any sum not less than ten nor more than one hundred dollars. And each day said physician shall practice medicine, without being registered, as hereinbefore required, shall be deemed a separate offense.

§ 12. That this act take effect and be in force from and after its passage, for the purpose of the appointment and organization of the boards herein provided for; but no physician or surgeon shall be in violation of this act if he or she shall comply with the provisions thereof at or before the regular meeting of the county board, in July of the year 1881.

Approved March 9, 1881.

J. A. DIBRELL, Jr., M. D., Little Rock, Secretary State Board of Health, writes:

"In 1881 an act to regulate the practice of medicine was passed by the Legislature. It was thought if the act was made non-retroactive, that we could in the future secure the passage of a better act and with more strict requirements. The act, therefore, as it now exists, was regarded by its friends only as a basis for future legislation, and that after the status of non-graduates was established by law, there would be but little opposition to the passage of a new and better act. A bill of this kind passed the Senate but failed in the House this year. It provided that all practitioners should be graduates of reputable medical colleges.

"In my judgment this is the only correct standard, and a competent board should also be appointed to pass upon the diplomas and determine whether or not they are from reputable schools.

"The present act, imperfect as it is, has doubtless deterred many from practicing medicine, but I know of many instances where it has been evaded by applicants, who, having been rejected by their county board, instead of appealing to the State Board, as provided by law, for a re-examination, would travel around from one county to another until they finally secured the necessary certificate.

"Another very great defect is that the county boards are appointed by the county judges, who are not always competent to judge whether or not a physician is 'learned in the sciences of medicine and surgery,' and hence these boards are, in very many instances—I can not tell how many—made up of the very kind of men the law would exclude from practice."

#### MEDICAL DEPARTMENT, ARKANSAS INDUSTRIAL UNIVERSITY.

Little Rock, Ark. (Pop. 13 138.)

Organized in 1879. First class graduated in 1880. Classes have graduated each subsequent year. The faculty embraces eight professors, one demonstrator and seven lecturers.

**COURSE OF INSTRUCTION:** One graduating course of twenty weeks' duration annually. Lectures embrace practice of medicine, institutes and practice of surgery, obstetrics, diseases of women and children, general, descriptive and surgical anatomy, materia medica, therapeutics, hygiene, botany, institutes of medicine, clinical surgery, dermatology, medical chemistry, toxicology, ophthalmology, otology, genito-urinary diseases, physical diagnosis, oral surgery.

**REQUIREMENTS:** For admission, none. For graduation: (1) age, twenty-one years; (2) good moral character; (3) three years' study; (4) attendance on two full courses of lectures; (5) satisfactory examination; (6) thesis on some medical subject, or report of clinic.

**FEES:** Matriculation (paid once only,) \$5.00. Annual fee, \$50.00. Demonstrator, \$5.00. Hospital, \$5.00. Graduation, \$25.00.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1879-80	22	1	4.6
1880-81	32	10	31+
1881-82	36	5	14—
1882-83	32	32	12.5

Average percentage of graduates to matriculates during the past four years, *seventeen*.

## CALIFORNIA.

Population, 864 691. Number of physicians, 1851. Number of inhabitants to each physician, 467.

### AN ACT to Regulate the Practice of Medicine in the State of California.

[The following sections of two acts to regulate the practice of medicine—the original act, approved April 3, 1876; the act of amendment, approved April 1, 1878—are still in force.]

[SECTION 1—*Mandatory Act.*] Every person in this State practicing medicine or surgery in any of its departments, shall possess the qualifications required by this act. Every such person shall present his diploma to one of the boards of examiners herein named, together with the affidavit mentioned in this act. If the board shall find all the facts required to be stated in said affidavit to be true, the board of examiners shall issue its certificate to that effect, signed by all the members thereof, and sealed with the seal of the board, and such certificate shall be conclusive as to the rights of the person named therein, to practice medicine and surgery in any part of this State.

[§ 2—*Amendatory Act.*] The Medical Society of the State of California, the Eclectic Medical Society of the State of California, and the California State Homeopathic Medical Society, corporations organized and existing under and by virtue of the laws of this State, and no other corporation, society, persons or person, shall appoint annually a board of examiners, consisting of seven members, who shall hold their office for one year, and until their successors shall be chosen. The examiners so appointed shall go before a district or county judge and make oath that they are regular graduates, and that they will faithfully perform the duties of their office. Vacancies occurring in a board of examiners shall be filled by the society appointing it, by the selection of alternates or



otherwise. The boards of examiners now organized or existing under and by virtue of their appointments by the aforesaid societies, shall continue to act as such boards until their successors are appointed at the next annual election.

§ 3—*Original Act.* The board of examiners shall organize within three months after the passage of this act. They shall procure a seal, and shall receive, through their secretary, applications for certificates and examinations. The president of each board shall have authority to administer oaths, and the Board take testimony in all meetings relating to their duties. They shall issue certificates to all who furnish satisfactory proof of having received diplomas or licenses from legally chartered medical institutions in good standing. They shall prepare two forms of certificates, one for persons in possession of diplomas or licenses, the other for candidates examined by the board. They shall furnish to the county clerks of the several counties a list of all persons receiving certificates. In selecting places to hold their meetings, they shall, as far as is reasonable, accommodate applicants residing in different sections of the State, and due notice shall be published of all their meetings. Certificates shall be signed by all the members of the board granting them, and shall indicate the medical society to which the examining board is attached.

§ 3—*Amendatory Act.* Said Board of Examiners shall examine diplomas as to their genuineness, and if the diploma shall be found genuine as represented, the Secretary of the Board of Examiners shall receive a fee of five dollars from each graduate or licensee, and no further charge shall be made to the applicant; but if it be found to be fraudulent, or not lawfully owned by the possessor, the Board shall be entitled to charge and collect twenty dollars of the applicant presenting such diploma. The applicant shall accompany his diploma with an affidavit stating that he is the lawful possessor of the same; that he is the person therein named; that the diploma was procured in the regular course of medical instruction, and without fraud or misrepresentation of any kind; and that the medical institution granting the diploma had, at the time of the granting the same, a full corps of medical instructors, and was, at the said time, a legally incorporated institution, actually and in good faith engaged in the business of medical education, and in good standing as a medical institution, and that the applicant had complied with all the requirements of said institution. Such affidavit may be taken before any person authorized to administer oaths, and the same shall be attested under the hand and official seal of such officer, if he have a seal. In addition to such affidavit, the Board of Examiners may hear such further testimony as in their discretion they may deem proper to hear as to the verification of any such diploma, or as to the identity of the person named therein, or as to the manner in which any such diploma was procured. And if it should appear from such testimony that any fact stated in said affidavit is untrue, the application of such person for a certificate shall be rejected. None of said Boards shall entertain an application which has been rejected by another of said Boards, nor shall any rejected application be renewed until at least one year after the action of the Board rejecting the same.

§ 4—*Amendatory Act.* The Boards of Examiners must refuse certificates to individuals guilty of unprofessional conduct. But before any such refusal, the applicant must be cited, by a citation signed by the Secretary of the Board and sealed with its seal, to appear before the Board at a time and place certain for the purpose of being heard as to such unprofessional conduct. Said citation shall notify the applicant of the time and place where and when the matter of said unprofessional conduct shall be heard, the particular unprofessional conduct with which the applicant is charged, and that the applicant shall then and there appear in person, and attended with such witnesses to testify on his behalf as he may desire, or default will be taken against him, and his application for a certificate refused. The attendance of witnesses at such hearing shall be compelled by subpoenas issued by the Secretary of the Board under its seal: and said Secretary shall in no case refuse to issue any such subpoena on a fee of fifty cents being paid him for each subpoena. Said citations and said subpoenas shall be served in accordance with existing provisions of law as to the service of citations and subpoenas generally. At such hearing witnesses shall be examined on the part of the Board and on the part of the applicant as to the fact of the applicant having been guilty of the conduct set out in the citation; and either side may examine medical experts as to whether such conduct is unprofessional; and if it appears to the satisfaction of the Board that the applicant is guilty of said unprofessional conduct, no certificate shall be issued to him. But no application shall be refused on the ground of unprofessional conduct, unless the applicant has been guilty of unprofessional conduct within one year next preceding his application. If any holder of a certificate be guilty of unprofessional conduct, his certificate must be revoked by the Board granting it; but no such revocation shall be valid without said holder being cited to appear, and the same proceedings be had as is hereinabove provided in this section, in case of refusal to grant a certificate. Whenever a certificate is revoked, the Secretary of the Board revoking the same shall certify, under the seal of the Board, to the County Clerk of the county in which the person whose certificate has been revoked is at the time of said revocation practicing his profession, and said clerk shall thereupon write on the margin or across the face of his register of the certificate of such person the fact of such revocation, signing his name thereto, and shall file in his office said certificate of revocation. Each of said Boards may, from time to time, adopt such rules as may be necessary to the orderly conduct of all the proceedings taken and had before it. It shall be the duty of the secretaries of the respective Boards to notify the secretaries of all other Boards provided for under this act, of all applicants to whom licenses may have been refused, together with the reasons of such refusal by such Boards.

§ 10—*Original Act.* In all cases of refusal or revocation of a certificate, the applicant may appeal to the body appointing the Board.

§ 9—*Amendatory Act.* Should either of the said boards issue a certificate to any person whose application for a certificate has been previously rejected by another of the said boards within one year after the rejection of said application, then, in such case, the certificate issued as aforesaid to said rejected applicant shall be null and void and of no effect.

§ 8—*Amendatory Act.* Any person assuming to act as a member of a board of examiners, under this act, or under the act to which this act is supplemental and amendatory, and who shall sign or subscribe, or issue or cause to be issued, or seal or cause to be sealed, a certificate authorizing any person to practice medicine or surgery in this State, except the person so acting and doing be appointed by one of the societies mentioned in section two of this act, or be authorized so to do by a board of examiners appointed by one of the societies mentioned in section two of this act, shall be deemed guilty of a misdemeanor, and shall be punished by a fine of not less than fifty dollars (\$50), or by imprisonment in the county jail for a period of not less than thirty days nor more than three hundred and sixty-five days, or by both such fine and imprisonment.

§ 5—*Original Act.* All examinations of persons not graduates or licentiates shall be made directly by the board, and the certificates given by the boards shall authorize the possessor to practice medicine and surgery in the State of California; but no examination into the qualifications of persons not holding diplomas or licenses shall be made after the thirty-first day of December, eighteen hundred and seventy-six. After that date no certificates shall be granted by them, except to persons presenting diplomas or licenses from legally-chartered medical institutions in good standing.

§ 8—*Original Act.* Candidates for examination shall pay a fee of five dollars, in advance, which shall be returned to them if a certificate be refused. The fees received by the board shall be paid into the treasury of the medical society by which the board shall have been appointed, and the expenses and compensation of the board shall be subject to arrangement with the society.

§ 9—*Original Act.* Examinations may be in whole or in part in writing, and shall be of an elementary and practical character, but sufficiently strict to test the qualifications of the candidate as a practitioner.

§ 6—*Original Act.* Every person holding a certificate from a board of examiners shall have it recorded in the office of the clerk of the county in which he resides, and the record shall be indorsed thereon. Any person removing to another county to practice, shall procure an indorsement to that effect on the certificate from the county clerk, and shall record the certificate, in like manner, in the county to which he removes, and the holder of the certificate shall pay to the county clerk the usual fees for making the record.

§ 7—*Original Act.* The county clerk shall keep, in a book provided for the purpose, a complete list of the certificates recorded by him, with the date of the issue and the name of the medical society represented by the board of examiners issuing them. If the certificate be based on a diploma or license, he shall record the name of the medical institution conferring it, and the date when conferred. The register of the county clerk shall be open to public inspection during business hours.

§ 5—*Amendatory Act.* Any person shall be regarded as practicing medicine within the meaning of this act who shall profess publicly to be a physician or who shall habitually prescribe for the sick, or who shall append to his name the letters "M. D." But nothing herein contained shall be construed to prohibit gratuitous services in case of emergency. And this act and the act to which this act is supplemental and amendatory shall not apply to lawfully commissioned surgeons of the United States army and navy practicing their profession within the limits of this State.

§ 7—*Amendatory Act.* Any person practicing medicine or surgery in this State, without first having procured a certificate to so practice from one of the boards of examiners appointed by one of the societies mentioned in section two of this act, shall be deemed guilty of a misdemeanor, and shall be subject to the penalties provided in section thirteen of the act to which this act is amendatory and supplemental; but no person who holds a certificate from one of such boards of examiners, or who holds a certificate heretofore granted by the board of examiners heretofore existing by virtue of appointment by the California State Medical Society of Homeopathic Practitioners, shall be compelled to procure a new certificate; and all powers and privileges of said boards of examiners under the act to which this act is supplemental and amendatory, are hereby transferred to the boards of examiners created by this act.

§ 12—*Original Act.* § 6—*Amendatory Act.* Any itinerant vender who shall sell or offer for sale any drug, nostrum, ointment, or appliance of any kind intended for the treatment of disease or injury; or any person who shall, by writing or printing, or by any other method, publicly profess to cure or treat disease, injury or deformity by any medicine, drug or drugs, nostrum, manipulation, or other expedient, shall pay a license of one hundred dollars a month. Such license shall be collected as other licenses are.

§ 13—*Original Act.* Any person practicing medicine or surgery in this State, without complying with the provisions of this act, shall be punished by a fine of not less than fifty dollars (\$50), nor more than five hundred dollars (\$500), or by imprisonment in the county jail for a period of not less than thirty days nor more than three hundred and sixty-five days, or by both such fine and imprisonment, for each and every offense; and any person filing or attempting to file, as his own, the diploma or certificate of another, or a forged affidavit of identification, shall be guilty of a felony, and, upon conviction, shall be subject to such fine and imprisonment as are made and provided by the statutes of this State for the crime of forgery.

[Section 11 of the original act permitted students to "prescribe under the supervision of preceptors;" but this permission is rescinded by the amendatory act.]

Dr. F. W. HATCH, Sacramento, Secretary California State Board of Health, writes:

"Our medical law does not give entire satisfaction. \* \* \* and efforts have been made during the last two sessions of the Legislature to have it again amended. \* \* \* At present there are three State Medical Societies, Regular, Homeopathic and Eclectic, each having an examining board, and each equally recognized under the law. It is known that many have been thus licensed who are totally and notoriously unqualified to practice medicine. \* \* \*

"The present law has served some good purpose in San Francisco, where several convictions have been had. Its constitutionality has been tried and affirmed in the Supreme Court."

#### COOPER MEDICAL COLLEGE.

San Francisco, Cal. (Pop. 233 959.)

Organized in 1859 as the Medical Department of the University of the Pacific. Ceased to exist in 1864, but was revived in 1870, under the same name. In 1882 it became the Medical Department of the University College of San Francisco, and was given the specific designation of the Medical College of the Pacific. In 1882 the institution received its present name.—The first class was graduated in 1860. No classes were graduated in the years '65, '66, '67, '68 or '69. A class graduated in 1870 and each subsequent year.—Faculty embraces twelve chairs, two adjuncts and a demonstrator of anatomy. One intermediate (recitation) course and one regular (graduating) course annually.

**COURSE OF INSTRUCTION:** Graded, comprising three regular courses of lectures of twenty weeks each.—First year: The student directs his attention *mainly* to descriptive anatomy with dissections, physiology, chemistry, microscopy, histology and surgery, upon which subjects an examination is held at the close of the course. He is, however, expected to attend to all didactic lectures.—Second year: To the studies above enumerated are added *materia medica* and therapeutics, theory and practice of medicine, obstetrics, gynecology, ophthalmology, otology and pathology, with clinics on various branches.—At the close of this year *final* examinations are had in descriptive anatomy, physiology and chemistry.—Third year: Surgical anatomy, surgery, *materia medica*, therapeutics, theory and practice of medicine, obstetrics, gynecology, ophthalmology, otology, microscopy, histology and pathology. Clinics.—Final examination on all subjects in the third year.—Examination both oral and written. Instruction is given, during the intermediate course, in hygiene and medical jurisprudence.

**REQUIREMENTS:** For admission, evidence of at least a fair English education, or a matriculation examination. For graduation: (1) good moral character; (2) twenty-one years of age; (3) three regular courses of lectures; (4) two courses of clinical instruction; (5) one course of practical anatomy, dissecting the entire subject; (6) satisfactory thesis; (7) successful passing of all examinations.

**FEES:** Matriculation, \$5; lectures (three courses), \$260; demonstrator, \$10; graduation, \$40.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	65	26	40
1878-79	58	15	26—
1879-80	42	7	17—
1880-81	59	9	15+
1881-82	67	12	18
1882-83	83	—	—

Average percentage of graduates to matriculates during the five years, 1882 inclusive, *twenty-four*.

Graduates in Illinois, 1.

**REMARKS:** "While the adoption of a three years' course is a direct pecuniary disadvantage to the College, it is, nevertheless, a great satisfaction to have accomplished this result, as it has been the constant desire of the faculty to raise the standard of medical education, and to graduate capable rather than many students."

#### UNIVERSITY OF CALIFORNIA MEDICAL COLLEGE (*Toland Medical College*.)

San Francisco, Cal.

Organized in 1863 as the Toland Medical College. Became connected with the University of California in 1872.—The faculty embraces eleven professors, one lecturer and one demonstrator.

**COURSE OF INSTRUCTION:** One reading term of twelve, and one regular term of twenty, weeks' duration annually. The course is graded and extends over three years. Students are expected to attend clinics regularly. Examinations are held daily and at the beginning of each session, to determine the progress of the student, his advancement depending on the result of such examination. These examinations are not final, as the examination for graduation includes all the subjects of the three years' course.—Studies: First year—Descriptive anatomy, general chemistry, physiology and *materia medica*. Second year—Theory and practice of medicine, theory and practice of surgery, principles of obstetrics, general and surgical anatomy, medical and physical chemistry, physiology of the nervous system and reproduction, therapeutics and pathology. Third year—Clinical medicine, clinical surgery, obstetrics, diseases of women, diseases of children, diseases of eye and ear, medical jurisprudence, hygiene and mental diseases.

**REQUIREMENTS:** For admission, none.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) three full years' study; (4) three regular courses of lectures; (5) successful passage on all subjects by written and oral examination; (6) practical anatomy during two sessions; (7) thesis.



**FEES:** Matriculation, \$5; demonstrator, \$10; first and second course of lectures, \$120 each; third course, free; graduation, \$10.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and per centages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	—	11	—
1878-79	—	13	—
1879-80	—	11	—
1880-81	61	16	26+
1881-82	59	15	25+

Average percentage of graduates to matriculates, two years, 1880-81 and 1881-82, *twenty-six*.

Number of graduates in Illinois, 1.

**REMARKS:** The sessions of this College, and of the Cooper Medical College, commence June first and close November first.

In 1884, and each year thereafter, the regular course of lectures will be lengthened to nine months, beginning February first and ending October thirty-first, with a vacation of two weeks in the middle of the term.

In 1885, a matriculation examination will be required of those not college graduates or matriculates in the following subjects: English grammar, arithmetic, geography, elementary chemistry. In 1886, and every year thereafter, this examination will also embrace algebra, physics and botany.

#### CALIFORNIA MEDICAL COLLEGE (*Eclectic*.)

Oakland, Cal. (Pop. 34 555.)

Organized in 1879. The first class was graduated in 1880.—The faculty embraces ten professors, one adjunct professor, and a demonstrator.

**COURSE OF INSTRUCTION:** One intermediate of twelve weeks' duration, and one regular course of twenty-four weeks' duration. Clinics at hospital and dispensary. Three years' graded course recommended but not required.—Lectures embrace principles and practice of medicine, obstetrics, surgery, anatomy, surgical anatomy, physiology, materia medica, chemistry, clinical and operative surgery, clinical medicine, therapeutics, pathology, gynecology, medical jurisprudence, clinical midwifery, diseases of children, clinical diseases of women, clinical diseases of children, mental diseases, hygiene, ophthalmology, otology, clinical diseases of the eye and ear, toxicology, physical diagnosis, laryngoscopy, diseases of the heart and lungs, and nervous diseases.

**REQUIREMENTS:** For admission, (1) certificate of good moral standing; (2) diploma from a high school, college or university, (3) or not having a diploma must "undergo a thorough examination in the branches of a good English education, including mathematics, composition and elementary natural philosophy.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) "such education as shall give him proper standing with the public and profession;" (4) three regular courses or two intermediate and two regular courses; (5) practical anatomy at least two sessions; (6) "satisfactory examination upon the essential points in the general practice of medicine;" (7) thesis.

**FEES:** Matriculation, \$5; lectures, \$120; demonstrator, \$10; graduation, \$30.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1879-80	48	13	27+
1879-81	31	11	35.5
1881-82	25	10	40.
1882-83	32	11	34.4

Average percentage of graduates to matriculates, *thirty-three*.

Number of Illinois students during the past year, 1.

**REMARKS:** DR. D. MACLEAN, writes: "We endeavor to conform with your requirements and expect to raise the standard. One half of our graduates take the three-term course, and we expect in a year or two to require three terms of all."

**CANADA.****Manitoba, Province of.**

Population, (census of 1881,) 65 954. Number of physicians, 65. Number of inhabitants to each physician, 1140.

**THE MANITOBA MEDICAL ACT.**

WHEREAS, It is expedient to make provisions in respect of medical practitioners in this Province; therefore,

SECTION 1. The following persons, and no others, that is to say, all persons being at the time of the passing of this act in actual practice of the profession of medicine, surgery and midwifery in this province, and being duly registered according to law, shall constitute the medical profession of the Province of Manitoba.

§ 2. The medical profession of Manitoba is hereby incorporated under the name and style of "The College of Physicians and Surgeons of Manitoba," and the said College of Physicians shall be deemed to be and to have been, from the third day of May, 1871, a body politic and corporate; and every person who may be registered hereafter under the provisions hereof, shall be a member of the College and the said corporation shall, by said name, have perpetual succession and a common seal, with power to change, alter, break, or make new the same; and by the name aforesaid, may sue and be sued, implead and be impleaded, answer and be answered unto, in all courts and places whatsoever, and may have hold, receive, enjoy, possess, and retain for the purposes of said corporation all such sums of money as may at any time be given or bequeathed to and for the use of the same, and by the said name purchase, take hold and enjoy any real estate, or any estate or interest derived or arising out of real estate, for the purposes aforesaid, and for no other purpose; and may sell, grant, lease or otherwise dispose of the same; but the real estate so held by the said corporation shall at no time exceed in annual value the sum of five thousand dollars.

§ 3. The affairs of said College of Physicians and Surgeons shall be managed by a medical board, under the name of "The Medical Board of Manitoba."

§ 4. The Medical Board of Manitoba shall be composed as follows: Of one member to be chosen from every college or body in the Province, which may be hereafter authorized to establish a medical faculty in connection therewith, and which may be affiliated with any university in the Province, or in any Province of the Dominion of Canada, and of five members to be elected by the duly registered members of the profession.

§ 5. The members of such Medical Board shall be elected, or appointed, as the case may be, for the period of five years; but any member may resign his appointment at any time by letter addressed to the president or registrar of the Board; and upon the death or resignation of any member of the Board, it shall be the duty of the registrar, forthwith, to notify the college, or body wherein such vacancy may occur, of such death or resignation; and such college, or body, shall have power to nominate another qualified person to fill such vacancy; and it shall be lawful for the Board, during such vacancy, to exercise the powers hereafter mentioned.

§ 6. Every election for the five members to represent the duly licensed and registered practitioners shall take place on the second Tuesday of June, in the city of Winnipeg, for and until the full end and term of five years, and until their successors are appointed; and the first election shall take place on the second Tuesday of June, 1877.

§ 7. The newly-elected members of the Medical Board, as well as the members of the Board to be hereafter elected, shall, together with the members to be appointed by the several colleges and bodies, as mentioned in Section 129, hold their meetings at such time and place as may be fixed by by-law or resolution of the Board.

§ 8. All members of the Board shall be practitioners, duly registered according to law.

§ 9. The persons entitled to vote at any election shall be all duly-registered practitioners.

§ 10. The Medical Board shall meet and organize on the next day after their election, by appointing from amongst their members, a president, a vice-president, and a registrar, and such other officers from amongst the duly-licensed practitioners as may from time to time be necessary for the working of the corporation, who shall hold office during the pleasure of the Board; and the said Board shall have power to fix by by-law or resolution, from time to time, the salaries or fees to be paid to any of such officers, and to the committee of examiners hereinafter appointed.

§ 11. The Medical Board may from time to time submit to a general meeting of the duly-licensed practitioners convened for that purpose, a tariff of professional fees; and upon such tariff of fees receiving the approval of a majority of such meeting, the same shall be held to be prima facie a "scale of reasonable charges."

§ 12. The Board shall from time to time, as occasion may require, make orders, regulations or by-laws for regulating the registers to be kept, under the provisions hereof, and the fees to be paid for registration, and shall from time to time make rules and regulations for the guidance of the committee of examiners, and may prescribe the subjects and mode of examinations, the time and place of holding the same, and generally make all such rules and regulations in respect of such examinations, or other matters not contrary to law, as they may deem expedient and necessary.

§ 13. At the first regular meeting of the Medical Board, such Board may make by-laws and regulations respecting the mode and manner in which elections shall be conducted thereafter not contrary to law; and the said Board may, as soon after as prac-



licable, and at the annual meeting in each year thereafter, select and appoint a committee of examiners, whose duty it shall be, at least once in each year, to examine all candidates for registration, in accordance with law, and with the rules and regulations in that behalf; such by-laws, rules and regulations to be submitted to the approval of the Lieutenant-Governor in Council.

§ 14. The Committee of Examiners appointed under the preceding section shall be composed as follows: One member for each of the schools of medicine in the Province, which may be hereafter organized in connection with any university or college which is empowered by law to grant medical or surgical diplomas, and a number, not exceeding five members, to be chosen from among the members of the College of Physicians of Manitoba who are unconnected with any of the above teaching bodies.

§ 15. The medical board shall cause to be kept by the registrar a book or register in which shall be entered the name of every person registered according to law; and from time to time, the names of all persons who shall have passed a satisfactory examination according to law and the rules and regulation in that behalf; and those persons only whose names have been, or shall hereafter be inscribed on the book or register aforesaid, shall be deemed to be qualified and licensed to practice medicine, surgery or midwifery in the Province of Manitoba, except as hereinafter provided; and such book or register shall be prima facie evidence in all courts that the persons therein specified are registered according to law; and such book or register shall at all times be open and subject to inspection by any duly registered practitioner in Manitoba.

§ 16. It shall be the duty of the registrar to keep his register correct in accordance with the provisions hereof, and the rules, orders and regulations of the medical board.

§ 17. Every person who possesses any medical degree or diploma in any university or college which is empowered by law to grant medical or surgical degrees whereby such person is authorized to practice physic, surgery or midwifery in any of Her Majesty's dominions, such person shall on payment of a fee to be fixed by by-law of the board, not exceeding ten dollars, be entitled to be registered on producing to the registrar the document conferring or evidencing the qualification, or each of the qualifications, in respect whereof he seeks to be so registered; provided, however, that no one, already registered according to law, in this Province shall be liable to pay any fee for being registered under the provisions herein contained.

§ 18. Every person desirous of being registered under the provisions herein contained, and who shall not have become possessed of any of the qualifications mentioned in the next preceding section, shall, before being entitled to registration, present himself for examination as to his knowledge and skill for the efficient practice of his profession, before the committee of examiners herein provided for; and, upon passing the examination required, and proving to the satisfaction of the committee of examiners that he has complied with the rules and regulations made by the medical board, and on payment of such fees as the medical board may by general by-law establish, such person shall be entitled to be registered, and in virtue of such registration, to practice medicine, surgery and midwifery in the Province of Manitoba.

§ 19. Each member of the college shall pay to the registrar or to any person deputed by the registrar to receive it, a fee of five dollars a year or such annual fee as may be determined by by-law of the board, not less than two dollars, towards the general expenses of the college; which said annual fee shall be payable on the first day of January in any year the same may be imposed; and such fee shall be deemed to be a debt due by the member to the college, and recoverable, with costs of suit, in the name of the corporation.

§ 20. Any person obligated to be registered according to law, but who shall neglect or omit to be registered, shall not be entitled to any of the rights and privileges conferred by registration, so long as such neglect or omission continues; and he shall be liable to all the penalties imposed by law against unqualified or unregistered practitioners.

§ 21. If the registrar make or cause to be made any wilful falsification in any matter relating to the register, he shall incur a penalty of fifty dollars, and shall be disqualified from again holding that position.

§ 22. Every person registered, who may have obtained any higher degree, or any qualification other than the qualification in respect of which he may have been registered, shall be entitled to have such higher degree or additional qualification inserted in the register in substitution for, or in addition to, the qualification previously registered, on payment of such fee as the board may appoint.

§ 23. No qualification shall be entered on the register, either on the first registration or by way of addition to a registered name, unless the registrar be satisfied by proper evidence that the person claiming is entitled to it; and any appeal from the decision of the registrar may be decided by the medical board; and any entry which shall be proved to the satisfaction of the board to have been fraudulently or incorrectly made, may be erased from the register by an order in writing from the board; provided, always that in the event of the registrar being dissatisfied with the evidence by the person claiming to be registered, he shall have the power, subject to an appeal to the board, of refusing the said registration, until the person claiming to be registered shall have furnished such evidence, duly attested by oath or affirmation, before any judge of the court of Queen's Bench.

§ 24. Every person who shall be duly registered shall be entitled, according to his qualification or qualifications, to practice medicine, surgery or midwifery, or any of them, as the case may be, in the Province of Manitoba, and to demand and recover in any court of law, with full costs of suit, "reasonable charges" for professional aid, advice and visits, and the costs of any medicine or other medical or surgical appliances rendered or supplied by him to his patients.

§ 25. The Medical Board shall have power and authority to appoint an examiner or examiners for the admission of all students to matriculation or preliminary examination, and to make by-laws and regulations, not contrary to the provisions of this or any other act, for determining the admission enrolment of students; and it shall be lawful for the Board, from time to time, as it may be deemed expedient, to enact by-laws as to the terms upon which it will receive the matriculation and other certificates of colleges, and other institutions not in the Province of Manitoba; provided, however, that any graduate or any student having matriculated in any university in Her Majesty's dominions, shall not be required to pass the preliminary examination.

§ 26. The Medical Board shall have power and authority to fix and determine, from time to time, the curriculum of studies to be pursued by the students, and such curriculum of studies shall be observed and taught.

§ 27. No person shall be entitled to recover any charge in any court of law for any medical or surgical advice, or for attendance, or for the performance of any operation, or for any medicine which he shall have prescribed or supplied, unless he is registered in pursuance of the provisions hereof; nor can he receive any public appointment as physician and surgeon; provided, however, that this section shall not extend to the sale of any drug or medicine by any duly licensed chemist or druggist.

§ 28. *a.* It shall not be lawful for any person not registered to practise physic, surgery or midwifery in the Province of Manitoba for hire, gain or hope of reward; and if any person not registered shall for hire, gain or hope of reward, practise or profess to practise physic, surgery or midwifery, or advertise to give advice in physic, surgery or midwifery in the Province of Manitoba, he shall, upon a summary conviction thereof, before any justice of the peace of the county wherein the offence is committed, for any and every such offense, pay a penalty not exceeding one hundred dollars, nor less than twenty-five dollars.

*b.* Any person who shall wilfully or falsely pretend to be a physician, doctor of medicine, surgeon or general practitioner, or shall assume a title, addition or description other than he actually possesses and is legally entitled to, shall be liable, on conviction thereof, before any justice of the peace having jurisdiction where the offence is committed, to a penalty not exceeding fifty dollars.

*c.* Any person not registered who shall take or use any name, title, addition or description implying or calculated to lead people to infer that he is registered, or that he is recognized by law as a physician, surgeon, accoucheur, or a licentiate in medicine, surgery or midwifery, shall be liable, upon a summary conviction thereof before any such justice of the peace as aforesaid, to pay any penalty not exceeding one hundred dollars, nor less than twenty-five dollars.

*d.* In any such prosecution and trial, the burden and proof as to registration shall be upon the person charged.

*e.* All prosecutions under the provisions hereof may be brought and heard before any justice of the peace having jurisdiction where any such offence has been committed; and such justice of the peace shall have power to award payment of costs in addition to the penalty; and in case the penalty and costs awarded by him or them be not upon conviction forthwith paid, to commit the offender to the common gaol, there to be imprisoned for any term not exceeding one month, unless the penalty and costs be sooner paid.

*f.* Any person convicted as aforesaid who shall give notice of appeal against the decision of the convicting justice shall be required, before being released from custody, to give to said justice satisfactory security for the amount of the penalty, costs of conviction and appeal.

§ 29. All penalties recoverable in manner aforesaid shall be paid to the convicting justice, and by him paid to the registrar of the college, and shall form part of the funds thereof; any person may be prosecutor or complainant, and the medical board may allot such portion of the penalties recovered as may be expedient towards the payment of such prosecution: *Provided, always,* that every such prosecution shall be commenced within one year from the date of the alleged offense; and it is hereby provided that it shall be lawful for the medical board, by an order signed by the president, having the seal of the college appended thereto, to stay proceedings in any such prosecution where it may be deemed expedient.

§ 30. In all cases where proof of registration aforesaid is required to be made, the production of a printed or other copy of the register, certified under the hand of the registrar of the medical board for the time being, shall be sufficient evidence of all persons who are registered practitioners, in lieu of the production of the original register; and any certificate, upon such printed or other copy of the register, purporting to be signed by any person in his capacity of registrar, shall be prima facie evidence that such registrar is such registrar, without any proof of his signature or of his being in fact such registrar.

§ 31. The words "legally qualified medical practitioners," or "duly qualified medical practitioners," or any other word importing legal recognition of any person as a medical practitioner or member of the medical profession, when used in reference to law, shall be deemed to apply, and shall be construed to mean, a person registered according to the laws of this Province.

§ 32. The section in division 6 of this chapter may be cited as "The Manitoba Medical Act."

## New Brunswick, Province of—

Population, 321 129. (Census of 1881.) Number of physicians, 275. (Figures furnished by W. F. COLEMAN, M.D., of St. John, N. B.) Average number of inhabitants to each physician, 1167.

AN ACT relating to the Registration and Qualification of Physicians and Surgeons; passed 25th March, 1881.

Be it enacted by the Lieutenant Governor, Legislative Council, and Assembly, as follows:

1. This act may be cited as "The New Brunswick Medical Act, 1881."
2. All persons who are qualified to register under section 38 of this act, and who do register after the passing of this act, shall constitute The New Brunswick Medical Society.
3. There shall be a Medical Council, composed of nine legally qualified medical practitioners of not less than seven years' standing, four of whom shall be nominated and appointed by the Governor in council, and five by The New Brunswick Medical Society; of which council any five shall constitute a quorum for the purpose of carrying out the provisions of this act.
4. Every vacancy in such council, whether caused by death, resignation, removal from office, or otherwise, shall be filled up by the body or authority who shall have nominated and appointed the person causing such vacancy, with as little delay as possible, so that as far as practicable the council shall always consist of nine members, four appointed by the Governor in council and five by The New Brunswick Medical Society. In case of dissolution of such society, or their neglect or refusal to fill up a vacancy, which they are empowered and directed by this section to supply, within three months after such vacancy shall have been caused, the remaining members of the medical council shall nominate and appoint a properly qualified person to fill such vacancy, in the place and stead of the New Brunswick Medical Society. In case of a similar neglect or refusal on the part of the Governor in council, the medical council shall exercise the like power: *Provided*, that no person shall be capable of being appointed to such council who shall not have the qualifications prescribed in the last preceding section for the first nine members of the council.
5. The medical council shall be styled and named "The Council of Physicians and Surgeons of New Brunswick," in this act called "The Council."
6. The council, or a majority of the members comprising the same, shall appoint, from time to time, a regular medical practitioner, duly qualified under this act, to act as secretary of the council, and keep a record of the proceedings of the same in a book or books to be provided by him for that purpose, together with all such matters and things as to the council shall appertain.
7. The secretary shall also be the registrar of the council, and shall be paid such salary, out of the moneys to be received as hereinafter provided, as the council shall determine.
8. The registrar of the council shall, before the first day of May in every year, cause to be printed and published in the Royal Gazette of this Province, and in such other manner as the council shall appoint, a correct register of the names, in alphabetical order, according to the surnames, with the respective residences (in the form set forth in Schedule A to this act, or to the like effect), and medical titles, diplomas and qualifications conferred by any college or body, with the dates thereof, of all persons appearing on the register as existing on the first day of January in such year, and such register shall be called the "Medical Register;" and a copy of such register for the time being, purporting to be so printed and published as aforesaid, or a certificate signed by the president of the council, and attested by the registrar, with the corporate seal of the council attached, shall be *prima facie* evidence in all courts and before all justices of the peace and others, that the persons therein specified are registered and qualified according to the provisions of this Act; and the absence of the name of any person from such copy, or the want of such certificate, shall be *prima facie* evidence that such person is not registered according to the provisions of this act: *Provided, always*, that in the case of any person whose name does not appear in any such copy, a certified copy, under the hand of the registrar of the council, of the entry of the name of such person on the register, shall be evidence that such person is registered under the provisions of this act.
9. Thereafter no person shall begin or enter upon the study of physic, surgery or midwifery, for the purpose of qualifying himself to practice the same in this Province, unless he shall have obtained from the Council of Physicians and Surgeons a certificate that he has satisfactorily passed a matriculation or preliminary examination in the subjects specified in Schedule B to this act (*vide infra*), or unless he has passed a matriculation examination for an undergraduate course in arts and science at some college in Great Britain, Ireland, Canada, the United States of America, or the continent of Europe.
10. No candidate shall be admitted to such matriculation or preliminary examination unless he shall have, at least fourteen days previous to such examination, given notice to the registrar of the council of his intention to present himself for such examination, and transmitted to the registrar a certificate showing that he has completed his sixteenth year, and shall, before the examination, have paid a fee of five dollars to the registrar.
11. Subject to the exceptions hereinafter made, no person shall practice physic, surgery or midwifery in New Brunswick unless his name shall be registered in the book of registry of the Council of Physicians and Surgeons, or unless he shall have received from such council a license to practice.



12. No person shall be entitled to have his name entered on the register of the council, or to receive a license to practice from such council, unless he shall satisfy the council that he has passed the matriculation or preliminary examination; that, after passing such examination, he has followed his studies during a period of not less than four years (one of which may be under the direction of one or more general practitioners duly licensed); that during such four years he has attended, at some university, college or incorporated school of medicine in good standing, courses of lectures amounting together to not less than twelve months, on general anatomy, on practical anatomy, on surgery, on materia medica and pharmacy, and on the institutes of medicine and on physiology, and one three months' course of medical jurisprudence; that he has attended the general practice of an hospital in which there are contained not less than fifty beds, under the charge of not less than two physicians or surgeons, for a period of not less than one year, or two periods of not less than six months each; that he has also attended two three months' courses or one six months' course of clinical medicine, and the same of clinical surgery; that he has, after examination in the subjects of the course, obtained a degree or diploma from such university, college or incorporated medical school, if such university, college or incorporated medical school requires a four years' course in order to the obtaining its diploma, or for the want of such degree or diploma that he has satisfactorily passed an examination in the various branches hereinbefore specified before examiners to be appointed by the council; that he is not less than twenty-one years of age; that he has paid to the registrar of the council a fee of ten dollars; provided that the council shall have power, subject to the approval of the Governor in council, to make such alterations in the foregoing curriculum as may from time to time be required; provided also, that in the event of any person applying for registration as a practitioner of any system of medicine, the registered practitioners of that system shall have the right to appoint an examiner or examiners on the subjects peculiar to that system, viz: materia medica, pharmacy and therapeutics, and if they shall neglect so to do, the council shall have the power to appoint such examiner or examiners.

13. The last preceding section shall not apply to any person in actual practice who shall be entitled to register under Section 38, and to receive a license to practice, under this act, on payment of two dollars; and notwithstanding the provisions of such section, any person, upon producing to the council conclusive evidence that he has passed a matriculation, or preliminary examination, such as is required by this act for persons beginning the medical studies in New Brunswick, that he has, before graduating, or taking a diploma, studied for at least four years in the manner provided in Section 12 of this act, or pursued what the council shall deem an equivalent course of study, and has passed a final examination in the subjects of such course; or, for want of such requisites, shall have fulfilled such conditions as the council may determine, and shall pay a fee of ten dollars, shall be entitled to be registered and to receive a license to practice.

14. Any resident of this Province who began the study of medicine, in a *bona fide* manner, before the first of January, 1881, and who was at that time a resident of this Province, shall, for the purposes of registration, be required to produce credentials, such as are specified in Section 38, and shall pay a fee of five dollars.

15. The council shall have power and it shall be their duty—

(1.) To elect a president and such other officers, including the secretary and registrar hereinbefore provided for, as may be necessary to the working of this act;

(2.) To regulate the practice of medicine, surgery and midwifery, by making rules, not inconsistent with this act, with regard to the preliminary qualification, course of study to be followed, the final examination, and the nature of the evidence to be produced before the council upon these subjects;

(3.) To appoint fit and proper persons to conduct the preliminary, or matriculation examinations, to decide upon the times for holding such examinations, and to fix the remuneration (if any) to be paid such examiners;

(4.) To appoint a committee of one or more, who shall be members of such council, to be called a registration committee, whose duty shall be to examine all degrees, diplomas, licenses, and other credentials presented or given in evidence under the said act, for the purpose of enabling the owner to practice in New Brunswick, and to oblige the owner of such credentials to attest on oath, or by affidavit, that he is the person whose name is mentioned therein, and that he became possessed thereof properly and honestly;

(5.) To cause every member of the profession practicing in New Brunswick to register his name, age, place of residence, place of nativity, the date of his license or diploma and the place where he obtained it, in the register of the council;

(6.) To make orders, regulations and by-laws for regulating the registers to be kept under this act;

(7.) To make all such rules, regulations and by-laws for carrying this act into effect, as to the council shall seem proper or necessary, which rules, regulations and by-laws shall not be inconsistent with this act, and may be disallowed by the Governor in council;

(8.) To appoint as many medical examiners, to hold final examinations when necessary, as the Council shall deem proper; to fix fees, not exceeding ten dollars; such examiners to be regularly-qualified practitioners of not less than five years professional standing and three years residence in this Province; members of the council may be appointed as such examiners.

16. The rules and regulations, if any, as to the times and places of the meetings of the council, and the mode of summoning the same by the council, shall remain in force until altered at any subsequent meeting. In the absence of any rule or regulation as to the summoning of future meetings of the council, it shall be lawful for the president thereof to summon the same at such time and place as to him shall seem fit, by circular-letter mailed to each member; he shall in like manner summon a meeting of the council, upon the requisition of a majority of members thereof: *Provided, always, that at least*

ten days' notice of such meeting shall be given. In the event of the absence of the president from any meeting, some other member, to be chosen from the members present, shall act as president. All acts of the council shall be decided by the majority of the members present, the whole number being not less than five. At all meetings the president shall have the privilege of voting.

17. All moneys forming part of the funds of the council shall be paid to the treasurer, and shall be applied to carrying this act into execution.

18. It shall be the duty of the registrar to keep his register correct, in accordance with the provisions of this act, and the rules, orders and regulations of the council, and to erase the names of all registered persons who shall have died, left the Province without any intention of returning, or ceased to practice for a period of five years; and he shall from time to time make the necessary alterations in the addresses or qualifications of the persons registered under this act: *Provided, always*, that that the name of any person erased from the register shall be restored by order of the council, upon sufficient cause duly shown to that effect.

19. Any person entitled to be registered under this act, but who shall neglect or omit to be so registered, shall not be entitled to any of the rights or privileges conferred by the provisions of this act, so long as such neglect or omission shall continue.

20. No person otherwise qualified under this act, shall be refused registration or a license to practice on account of his adopting or refusing to adopt the practice of any particular theory of medicine or surgery. In case of such refusal by the council, the party aggrieved shall have the right to appeal to the Governor in council, who, upon due cause shown, shall issue an order to the council to register the name of such person, and to grant him a license to practice, and that therefore the council shall forthwith register the name of such person, and grant him a license to practice.

21. No qualification shall be entered upon the register, either upon the first registration or by way of any addition to a registered name, unless the registrar shall be satisfied by the proper evidence that the person claiming is entitled to it; and any appeal from the decision of the registrar may be decided by the council, and any entry which shall be proved to the satisfaction of the council, to have been fraudulently or incorrectly made, may be erased from the register, by order in writing of the council, and the name of such person fraudulently registering or attempting so to register, may, at the discretion of the council, be published in the next issue of the Royal Gazette thereafter.

22. Any registered medical practitioner who shall have been convicted of any felony in any court, or shall, after due inquiry, been judged by the council to have been guilty of infamous conduct in any professional respect, shall thereby, subject to an appeal to the Governor in council, forfeit his right to registration, and by the direction of the council his name shall be erased from the register.

23. Every person registered under this act who may have obtained any higher degree or qualification, other than the qualification in respect of which he may have been registered, shall be entitled to have such higher degree or qualification inserted in the register in substitution for, or in addition to, the qualification previously registered, on the payment of such fee as the council may demand.

24. Every person who shall be registered under the provisions of this act shall be entitled, according to his qualification or qualifications, to practice medicine, surgery, midwifery, or dentistry, or either or any of them, as the case may be, in New Brunswick, and to demand and recover in any court of law, reasonable and customary charges for professional aid, advice and visits, and the cost of any medicine or other medical or surgical appliances rendered or supplied by him to his patients.

25. No person shall be entitled to recover any charge in any court of law for any medical or surgical advice, or for attendance, or for the performance of any operation, or for any medicine which he shall have both prescribed and supplied, unless he shall prove upon the trial that he is registered under this act.

26. The words "legally qualified medical practitioner," or "duly qualified medical practitioner," or any other words importing a person recognized by law as a medical practitioner or member of the medical profession, when used in any act of the Legislature or legal or public document, shall be construed to mean a person registered under this act.

27. No person shall be appointed as medical officer, physician or surgeon in any branch of the public service, or in any hospital or other charitable institution, unless he be registered under the provisions of this act.

28. No certificate required by any act now in force or that may hereafter be passed, from any physician or surgeon, or medical practitioner, shall be valid unless the person signing the same shall be registered under this act.

29. If any person not registered or licensed under this act, or not being actually employed as a physician or surgeon in Her Majesty's naval or military service, practices physic, surgery, or midwifery for hire, gain, or hope of reward, he shall thereby forfeit a sum of twenty dollars for each day upon which he so practices.

30. Any sum forfeited under the next preceding section shall be recoverable with costs, and may be sued for and recovered in the same manner as a private debt by the council or any member thereof, or any person appointed by the council or any member thereof, and being recovered shall belong to the council for the use thereof, under this act; providing that where the information leading to such recovery shall have been given by any person unconnected with the medical profession, such person shall be entitled to receive one-half of the sum so recovered. (No person adjudged to have forfeited any sum of money under sections 29 and 30 of the said act, or against whom any suit therefor shall have been brought, shall be entitled or subject to the provisions of any act or acts for the relief of debtors. Amendment passed April, 1882.)



31. Upon the trial of such cause the burden of proof as to the license or right of the defendant to practice physic, surgery, or midwifery in New Brunswick, shall be upon the defendant.

32. If the registrar make or cause to be made any wilful falsification in any matters relating to the register, he shall forfeit a sum not less than one hundred dollars; to be recovered as hereinbefore provided as to persons practicing medicine, surgery or midwifery illegally.

33. If any person shall wilfully procure or attempt to procure himself to be registered under this act by making or producing, or causing to be made or produced, any false or fraudulent representation or declaration, either verbally or in writing, every such person so doing, and every person knowingly aiding and assisting him therein shall forfeit and pay a sum not less than one hundred dollars to be recovered as a private debt, as hereinbefore provided.

34. Any person who shall wilfully and falsely pretend to be, or take or use any name, title, addition, or description implying that he is registered under this act, shall forfeit and pay a sum not exceeding one hundred dollars nor less than fifty dollars, to be sued for, recovered and appropriated as provided in section 30 of this act.

35. No suit shall be commenced under this act after one year from the date of the offence or cause of action.

36. Nothing in this act shall prevent any person from giving necessary medical or surgical aid or attendance to anyone in urgent need of it, provided that such aid or attendance is not given for hire or gain, nor the giving of it made a business or way of gaining a livelihood by such person; and nothing in this act shall be construed to prevent any woman from giving necessary aid in cases of confinement, as heretofore accustomed.

37. The members of the Council of Physicians and Surgeons of New Brunswick, appointed by or on behalf of the Governor in council, shall hold office for a term of four years, or until voluntary resignation; and the members appointed by or on behalf of the New Brunswick Medical Society, for three years from the date of appointment, or until voluntary resignation; provided, that it shall be lawful for the Governor in council at any time to remove any member of the council upon the written request of three-fourths of the remaining members (six or eight) of such council, and due cause shown.

38. All persons practicing medicine, surgery or midwifery, or all of them, in the Province, at the time of passing of this act, and who shall have previously obtained a degree or diploma in medicine or surgery from any legally chartered medical college or university in any country where such is recognized; and all persons who shall subsequently to the passing of this act, pass the examination prescribed by the Council of Physicians and Surgeons of this Province, or present approved credentials, certificates or diplomas equivalent to such examination; and all persons who shall have practiced medicine or surgery in the Province for a period of twenty years previous to the passing of this act, and who shall prove the same, shall be entitled to register and receive a license to practice under this act; and all persons who, at the passing of this act, are entitled to and claiming to so register, shall file a memorandum of their names and place of residence and practice, with their post-office address, in the Provincial Secretary's office at Fredericton, within three months after the passing of this act.

39. Any person, while employed in actual service in Her Majesty's naval or military service as physician or surgeon, may practice physic, surgery or midwifery in New Brunswick with registry or license.

40. The Council of Physicians and Surgeons shall hold a meeting in the city of Fredericton every year, at which annual meeting they shall have power to appoint examiners, fix the times of examination and transact all business arising out of this act; and any such meeting may be continued, by adjournment from day to day, until the business before the council is finished, but no such meeting shall be so continued beyond the Saturday of the week in which such sitting commences. The council shall also have power, and it shall be their duty, to hold such other meetings as may be necessary, at which meetings they shall have the powers and duties herein conferred and imposed upon the council at the annual meetings.

41. The books and accounts of the council shall at all times be open to the examination of such persons as the Governor in council or the New Brunswick Medical Society shall appoint to inspect the same, and also of all members of the council, and the accounts shall be annually published or laid before the Provincial Secretary.

42. The Council of Physicians and Surgeons shall, immediately upon the occurrence of a vacancy therein, communicate the fact to the Governor in council or to the New Brunswick Medical Society, according as such vacancy shall be, to be filled up by one or the other of those bodies, and shall also notify either of such bodies of any other business requiring the attention of the same under this act.

43. After the expiration of three months from the passing of this act, the Provincial Secretary shall call a meeting of the New Brunswick Medical Society, by causing notice of the time and place of such meeting to be published in one Fredericton and two Saint John newspapers. Previous to such meeting, the Governor in council shall, for the purpose of organization, appoint from the persons whose names are filed with the Provincial Secretary as hereinbefore provided, three scrutineers, who shall examine and determine the proofs and certificates of those claiming to be entitled to elect the council and organize the society under this act, whose determination shall be final in that respect; and upon the report of such scrutineers, the medical society shall convene as they are hereby directed and empowered by this section to do, and organize by electing a president and secretary from among their number; they shall have power, and it is hereby made their duty, to adopt their own by-laws, subject to the provisions of this act; they shall cause to be drawn up, and to adopt for the guidance of the members of the society, an approved code of medical ethics, and to transact such other business as to such societies shall

appertain; they shall at their first meeting elect from among their number, by nomination and ballot, five persons regularly qualified under this act to be members of the Council of Physicians and Surgeons of New Brunswick, and such five persons, together with four members appointed by the Governor in council, shall meet as soon as practicable thereafter and organize for the purpose of carrying out the provisions of this act.

44. Non-resident regular practitioners of medicine residing in the State of Maine, or in the Province of Quebec or Nova Scotia, near the boundary line of this Province, whose regular practice extends into any town, parish or county in New Brunswick, may register under the provisions of this act.

45. Chapter 93 of the Consolidated Statutes of New Brunswick, "Physicians and Surgeons," is hereby repealed: *Provided, nevertheless*, that this act shall not apply to or be construed to extend to clairvoyant physicians practicing at the present time in this Province, or to midwives.

[Schedule "A," referred to in sec. 8, above, relates to the form in which the Medical Register shall be printed, and which is almost an exact counterpart of the form adopted in 1877 for the Official Register of the ILLINOIS STATE BOARD OF HEALTH.

[Schedule "B," referred to in sec. 9, above, provides a uniform standard of matriculation or preliminary examination, viz: Compulsory, English or French language, including grammar and composition, and writing and dictation; arithmetic, including vulgar and decimal fractions, and extraction of the square root; algebra, to the end of simple equations; geometry, first two books of Euclid; Latin, one book, translation, and grammar. Optional, one of the following: History of England, with quotations in modern geography; French translation; German translation; one Greek book; natural philosophy, including elementary mechanics; hydrostatics and pneumatics; history of New Brunswick; history of the Dominion.]

In April, 1882, the following sections, together with four others incorporated above in the proper places, were adopted as amendments to the original act.

5. Each registered medical practitioner shall, if required by the council, pay to the registrar, or any person deputed by the registrar to receive it, such annual fee as may be determined by by-law of the council, not less than one dollar nor more than two dollars, toward the general expenses of the council, which fee shall be paid on the first day of January in each year, and such fee shall be deemed to be a debt due by the registered medical practitioner, and recoverable, with costs of suit, in the name of the Council of Physicians and Surgeons of New Brunswick, in any court of competent jurisdiction.

6. Any oath or affidavit required to be taken under the said act, "The New Brunswick Medical Act, 1881," or under this act, shall and may be taken and had by and before any justice of the peace, as well as before any person by law authorized to take any oath or affidavit; and any affidavit heretofore made by any person under the provisions of the said act, before a justice of the peace, shall be deemed to have been duly and properly made and taken, and be as effectual as if the power to take such affidavit had been expressly given to a justice of the peace in and by the said act.

Dr. W. F. COLEMAN (M. R. C. S., Eng.) writes that "there are two hundred registered practitioners in New Brunswick, and probably fifty or seventy-five more qualified to register who have not done so.

"Unqualified persons continue to practice, and no action has yet been taken against them. By 'unqualified,' I mean those not qualified to register; but, in fact, all not registered are unqualified under the act."

## Nova Scotia, Province of.

Population, 440 885. (Census of 1881.)

[An act regulating the practice of medicine and surgery exists in the Province of Nova Scotia, but although repeated attempts were made to procure a copy, they were unsuccessful.]

HALIFAX MEDICAL COLLEGE (*University of Halifax, Medical Department*).

Halifax, N. S. (Pop. 36 107.)

Organized in 1867, as the Medical Department of Dalhousie College; attained its present relation in 1876. First class graduated in 1872. Classes graduated in each subsequent year excepting 1873.—Faculty embraces eight professors, one adjunct professor, seven lecturers and instructors, and two demonstrators of anatomy.

COURSE OF INSTRUCTION: One annual graduating course of six months' duration. Three years graded course required, four years' course recommended; daily examinations by the professors; a roll of students attending each class is called from time to time.—Lectures embrace principles and practice of medicine, clinical medicine, obstetrics, gynecology, principles and practice of surgery, clinical surgery, physiology, anatomy, medical jurisprudence, dermatology, botany, diseases of children, practical chemistry, materia medica, therapeutics, microscopy, pharmacy.

**REQUIREMENTS;** For admission: (a) diploma of recognized university in arts: or, (b) matriculation examination on the following compulsory subjects:

English Language—including grammar, composition and writing from dictation. Arithmetic—including vulgar and decimal fractions, and the extraction of the square root. Algebra—to the end of simple equations. Geometry—first three books of Euclid. Latin—one book, translation and grammar. Elementary Mechanics of Solids and Fluids, and one of the following optional subjects, viz: History of England, with questions in modern geography. French translation. German translation. One Greek book. History of Nova Scotia. History of the Dominion of Canada.—For graduation: (1) four years' study; (2) three full courses of lectures; (3) one three months' course in practical pharmacy, chemistry, botany and medical jurisprudence; (4) two six-months' courses in other branches; (5) twelve months' attendance at a hospital; (6) three months' practice in dispensing drugs; (7) at least six cases of accouchement; (8) a certificate from a registered medical practitioner, of "proficiency in the practice of vaccination," one course of practical anatomy; (10) thesis; (11) twenty-one years of age; (12) a general written and oral examination on all the branches of medical and surgical science; (13) a clinical examination in medicine and surgery conducted at the bedside, cases being submitted for diagnosis and treatment in the wards of the hospital. In estimating the standing of candidates and the number of marks to be awarded, professors shall take into account the regularity of their attendance, and the diligence and care they have evinced in reporting cases.

**FEES:** Lectures, about \$60; practical anatomy, \$3; graduation, \$21.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentage of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	29	2	6—
1878-79	36	3	8+
1879-80	37	2	5.4
1880-81	35	2	5.7
1881-82	37	1	2.7
1882-83	41	3	7+

Average percentage of graduates to matriculates during the past six years, *sic*.

**REMARKS:** Dr. J. F. BLACK, Registrar, writes: "Our severe examination probably accounts for the small proportion of matriculates who graduate with us. We pass no man who is not able to satisfy our examination."

## Ontario, Province of.

Population 1,913,460 (census of 1881.) Number of physicians, 1700 (Ontario Medical Register, 1882.) Number of inhabitants to each physician, 1125.

### THE ONTARIO MEDICAL ACT.

Her Majesty, by and with the consent of the Legislative Assembly of the Province of Ontario, enacts as follows:—

I. This act may be cited as the "Ontario Medical Act."

II. The medical profession of Ontario heretofore incorporated under the name and style of "The College of Physicians and Surgeons of Ontario," shall be deemed to be, and to have been from the date of its first establishment a body corporate by the name aforesaid, having perpetual succession and a common seal, with power to acquire, hold, and dispose of chattel property and real estate for the purposes of this act, and to sue and be sued in the manner usual with such corporations.

III. Every person registered according to the provisions of the act passed in the twenty-ninth year of the reign of Her Majesty, and chaptered thirty-four, of the act passed in the thirty-second year [1869] of the reign of Her said Majesty, and chaptered forty-five, of the act passed in the thirty-seventh year [1874] of Her Majesty's reign and chaptered thirty, and the acts amending the same, shall be a member of the said College of Physicians and Surgeons of Ontario.

IV. Every person hereafter registered under the provisions of this act shall also be a member of the said College.

V. There shall be a council of the said College of Physicians and Surgeons of Ontario to be appointed in the manner hereinafter provided for in this act, and referred to in this act as "The Council."

VI. The council shall be composed of the following persons:—

*Firstly.* One member to be chosen from each of the colleges and bodies hereinafter designated, to-wit: The University of Toronto; Queen's University and College of Kingston; University of Victoria College; University of Trinity College; Royal College of Physicians and Surgeons, Kingston; Toronto School of Medicine; Trinity Medical School, and of every other college or body in the Province now by law authorized, or which may be hereafter authorized, to establish a medical faculty in connection therewith, and to grant degrees in medicine and surgery or other certificates of qualification to practice the same.



2. No teacher, professor or lecturer of any of the before-mentioned colleges or bodies shall hold a seat in the council, except as a representative of the college or body to which he belongs.

3. All members of the council, representing the colleges or bodies aforesaid, shall be practitioners duly registered under this act or the acts mentioned in section three of this act.

*Secondly.* Five members to be duly elected by the licensed practitioners in homoeopathy who have been registered under this act, or under the provisions in that behalf of any of the acts mentioned in section three of this act; and the five representatives of the eclectic system in the said council on the twenty-fourth day of March, 1874, shall be continued as such representatives for a period of five years from said date, when such representatives in the council shall cease and determine; and if any vacancy occurs during the said period, such vacancy may be filled as hereinafter mentioned.

*Thirdly.* Twelve members to be elected in the manner hereinafter provided from amongst and by the registered members of the profession other than those mentioned in the preceding sub-sections of this section.

2. The twelve members to be elected as aforesaid shall be residents of the several territorial divisions for which they are elected; and one member shall be so elected from each of the territorial divisions mentioned in Schedule "A" to this act annexed, by the registered practitioners of medicine resident in such division; and the manner of holding such election shall, with respect to the time thereof and the taking of the votes therefor, be determined by a by-law to be passed by the council \* \* \* or prescribed by the Lieutenant Governor.

VI. The members of the council shall be elected or appointed, as the case may be, for a period of five years; but any member may resign his appointment at any time by letter addressed to the president or registrar of the council, it shall be the duty of the registrar forthwith to notify the college or body wherein that vacancy has occurred; and such college or body shall have the power to nominate another duly-qualified person to fill such vacancy; or if the vacancy be caused by the death of any member elected from a territorial division the registrar shall forthwith cause a new election to be held in such territorial division in such manner as may be provided for by law of the council; and such election shall be conducted in accordance with the by-laws and regulations of the council, but it shall be lawful for the council, during such vacancy, to exercise the powers hereinafter mentioned.

2. In the event of the death or resignation of any member of the council representing the practitioners of the homoeopathic or eclectic systems of medicine respectively, it shall be lawful for the remaining representatives of homoeopathy or the eclectic system respectively, in the council, to fill such vacancy by selecting from amongst the duly registered practitioners in homoeopathy or the eclectic system respectively, a person to fill the said vacancy, caused either by death or resignation.

VIII. The persons entitled to vote under this act at any election shall be all duly registered practitioners.

IX. Any member of the College of Physicians and Surgeons of Ontario may have his name transferred from one class of voters to another class, on his presenting to the registrar a certificate duly signed by such member or members of the board of examiners appointed by the council to examine candidates on the subjects specified in this act, as peculiar to each school of medicine, testifying that the member so applying to have his name so transferred has shown a sufficient knowledge of the system of medicine he desires to connect himself with to entitle him to be admitted to the class he desires, and being so admitted he shall be entitled to vote in that class only.

2. No member shall be entitled to return to the class from which he has been so transferred without the sanction of the council; but no member shall at any time be entitled to vote in more than one class of the voters who, in accordance with the provisions of this act, vote in the election of the members of the council; and there shall be payable to the registrar for such transfer the same charge as is usual for the registration of an additional qualification, namely, two dollars.

X. In case of any doubt or dispute as to the legality of the election of any member of the council, it shall be lawful for the council to hold an inquiry and decide who is the legally elected member of the council; and the person whom they decide to have been elected shall be, and be deemed to be, the member legally elected; and if such election is found to have been illegal, the council shall have power to order a new election.

XI. The said elected members of the council shall, together with the members to be appointed by the several colleges and bodies as mentioned in section six of this act, hold their first meeting at such time and place as may be fixed by by-law of the council; and shall make such rules and regulations as to the times and places of subsequent meetings of the council, the mode of summoning the same, as to them seems expedient; which rules and regulations shall remain in force till altered at any subsequent meeting; and in the absence of any rules or regulations as to the summoning of future meetings of the council, it shall be lawful for the president thereof, or, in the event of his absence or death, for the registrar to summon the same at such time and place as to him seems fit, by circular letter, to be mailed to each member.

2. At least two weeks' notice of such meeting shall be given; and in the event of the absence of the president from any meeting, the vice-president, or, in his absence, some other member, to be chosen from among the members present, shall act as president.

3. All the acts of the council shall be decided by the majority of the members present, not being less than nine in number.

4. At all meetings, the president for the time being shall have a casting vote only.

XII. There shall be paid to the members of the council such fees for attendance, and such reasonable traveling expenses, as may from time to time be fixed by by-law passed by the said council.

XIII. The council shall annually appoint a president, vice-president, registrar, treasurer, and such other officers as may from time to time be necessary for the working of this act, who shall hold office during the pleasure of the council; and the said council shall have power to fix by by-law, or from time to time, the salaries or fees to be paid to such officers, and to the board of examiners hereinafter appointed.

XIV. The council shall appoint annually from among its members an "executive committee," to take cognizance of and action upon all such matters as may be delegated to it by the council, or such as may require immediate interference or attention between the adjournment of the council and its next meeting; and all such acts shall be valid only until the next ensuing meeting of the council; but such committee shall have no power to alter, repeal or suspend any by-law of the council.

#### *Division Associations.*

XV. In each of the territorial divisions described in Schedule A of this act, there may be established a "territorial division medical association," which may be called "The Division Association" of such division; every member of the College of Physicians and Surgeons of Ontario, resident within the said territorial division, shall be a member, and the representative in the council shall be *ex-officio* chairman of such division association.

XVI. The said division association may, from time to time, submit to the council a tariff, or tariffs, of professional fees, suitable to their division, or to separate portions of their division; and upon the said tariff or tariffs of fees receiving the approval of the council, signified by the seal of the College and by the signature of the president thereof being appended thereto, such tariff or tariffs shall be held to be a scale of reasonable charges within the meaning of section thirty-five of this act, for the division or section of a division where the member making the charge resides.

#### *Medical Education.*

XVII. The council shall have power and authority to appoint an examiner, or examiners, for the admission of all students to the matriculation and preliminary examination, and to make by-laws and regulations for determining the admission and enrollment of students; but any change in the curriculum of studies fixed by the Council shall not come into effect until one year after such change is made.

2. Until a homœopathic medical college for teaching purposes is established in Ontario, candidates wishing to be registered as homœopaths shall pass the matriculation examination established by this act, as the preliminary examination for all students in medicine, and shall present evidence of having spent the full period of study required by the curriculum of the council, under the supervision of a duly registered homœopathic Practitioner.

3. For a period of four years from the twenty-fourth day of March, 1874, such homœopathic students may pass their matriculation examination at any time prior to the passing of their professional examination.

4. Such candidates must also have complied with the full curriculum of studies prescribed from time to time by the council for medical students, but the full time of attendance upon lectures and hospitals required by the curriculum of the council may be spent in such homœopathic medical colleges in the United States or Europe as may be recognized by a majority of the homœopathic members of the council; but in all homœopathic colleges where the winter course of lectures is only of four months' duration, certified tickets of attendance on one such course shall be held to be equivalent to two-thirds of one six months' course, as required by the council; and when such teaching body has been established in Ontario, it shall be optional for such candidates to pursue in part or in full the required curriculum in Ontario.

XVIII. The council shall from time to time, as it may deem expedient, enact by-laws as to the terms upon which it will receive the matriculation and other certificates of colleges and other institutions not in the Province of Ontario.

XIX. Any graduate or any student having matriculated in arts in any University of her Majesty's Dominions, shall not be required to pass the preliminary examination.

XX. The council shall have power and authority to fix and determine, from time to time, a curriculum of studies to be pursued by the students, and such curriculum of studies shall be observed and taught by all colleges referred to in section six of this act.

#### *Medical Registration.*

XXI. The council shall cause to be kept by an officer appointed by them, and to be called the Registrar, a book or register, in which shall be entered the name of every person registered according to the provisions of this act, or the acts mentioned in the third section of this act; and from time to time the names of all persons who have complied with the enactments hereinafter contained, and with the rules and regulations made or to be made by the council respecting the qualifications to be required from practitioners of medicine, surgery and midwifery in this Province; and those persons only whose names are inscribed in the book or register above mentioned, shall be deemed to



be qualified and licensed to practice medicine, surgery or midwifery in this province, except as hereinafter provided; and such book or register shall at all times be open, and subject to inspection by any duly registered practitioner in Ontario, or by any other person.

XXII. It shall be the duty of the registrar to keep his register correct, in accordance with the provisions of this act, and the rules, orders and regulations of the council, and he shall from time to time make the necessary alterations in the addresses or qualifications of the persons registered under this act; and the said registrar shall perform such other duties as may be imposed upon him by the council.

XXIII. It shall be optional for the council to admit to registration all such persons as are duly registered in the Medical Register of Great Britain, or are otherwise authorized to practice medicine, surgery and midwifery in the United Kingdom of Great Britain and Ireland, upon such terms as the council may deem expedient.

2. Any person who was actually practicing medicine, surgery or midwifery, or any of them, in Ontario, prior to the first of January, 1859, and who has attended one course of lectures at any recognized medical school, shall, upon such proof as the council may require, be entitled to registration under this act.

3. Any person who was actually practicing medicine, surgery or midwifery according to the principles of homoeopathy or the eclectic system of medicine, before the first day of January, 1859, and for the six years preceding the twenty-fourth day of March, 1874, in Ontario, may, in the discretion of the representatives of the homoeopathic or eclectic system of medicine, respectively, be admitted to registration under this act.

XXIV. Every person who possesses any one or more of the qualifications dated prior to the twenty-third day of July, 1870, shall, on payment of a fee to be fixed by by-law of the council, not exceeding ten dollars, be entitled to be registered, on producing to the registrar the document conferring or evidencing the qualification, or such of the qualifications, in respect whereof he seeks to be so registered, or upon transmitting by post to the registrar information of his name and address, and evidence of the qualification in respect whereof he seeks to be registered, and of the time or times at which the same was attained; but no one registered under the acts mentioned in the third section of this act shall be liable to pay any fee for being registered under this act.

XXV. Every person desirous of being registered under the provisions of this act, and who had not become possessed of any one of the qualifications before the twenty-third day of July, 1870, shall, before being entitled to registration, present himself for examination as to his knowledge and skill for the efficient practice of his profession, before the board of examiners, in the twenty-eighth section mentioned; and upon passing the examination required, and proving to the satisfaction of the board of examiners that he has complied with the rules and regulations made by the council, and on the payment of such fees as the council may by general by-law establish, such person shall be entitled to be registered, and, in virtue of such registration, to practice medicine, surgery and midwifery in this Province.

XXVI. When and as soon as it appears that there has been established a "Central Examining Board," similar to that constituted by this act, or an institution duly recognized by the legislature of any of the provinces forming the Dominion of Canada, other than Ontario, as the sole examining body for the purpose of granting certificates of qualification, and wherein the curriculum is equal to that established in Ontario, the holder of any such certificate shall, upon due proof, be entitled to registration by the council of Ontario, if the same privilege is accorded by such Examining Board or institution to those holding certificates in Ontario.

XXVII. Each member of the college shall pay to the registrar, or any person deputed by the registrar to receive it, such annual fee as may be determined by by-law of the council, not less than one nor more than two dollars, towards the general expenses of the college, which last mentioned fee shall be payable on the first day of January, in the year in which the same is imposed; and such fee shall be deemed to be a debt due by the member to the college, and be recoverable with costs of suit in the name of the College of Physicians and Surgeons of Ontario, in the Division Court where the member resides.

XXVIII. At the annual meeting of the council in each year, there shall be elected by the members of the said council a "Board of Examiners," whose duty it shall be at least once in each year to examine all candidates for registration in accordance with the by-laws, rules and regulations of the council; such examinations to be held at Toronto or Kingston at such time and in such manner as the council may by law direct.

XXIX. The board of examiners appointed under the previous section shall be composed as follows: One member from each of the teaching bodies now existing, referred to in the sixth section of this act, and one from every other school of medicine which may be hereafter organized in connection with any university or college which is empowered by law to grant medical or surgical diplomas; and a number, not exceeding five members, to be chosen from among those members of the College of Physicians and Surgeons of Ontario who are unconnected with any of the above teaching bodies.

XXX. Any candidate who, at the time of his examination, signifies his wish to be registered as a homoeopathic or eclectic practitioner, shall not be required to pass an examination in either materia medica, or therapeutics, or in the theory or practice of physic, or in surgery or midwifery, except the operative practical parts thereof, before any examiners other than those approved of by the representatives in the council of the body to which he signifies his wish to belong.

XXXI. The council shall from time to time as occasion may require, make orders regulations or by-laws for regulating the registers to be kept under this act, and the fees to be paid for registration, and shall from time to time make rules and regulations for the guidance of the board of examiners, and may prescribe the subjects and modes of the

examinations, the time and place of holding the same, and generally may make all such rules and regulations in respect of such examinations not contrary to the provisions of this act, as they may deem expedient and necessary.

XXXII. Every person registered under this act who obtains any higher degree or qualification other than the qualification in respect of which he has been registered, shall be entitled to have such higher degree or additional qualification inserted in the register in substitution for, or in addition to, the qualification previously registered on the payment of such fees as the council may appoint.

XXXIII. No qualification shall be entered on the register either on the first registration or by way of addition to a registered name unless the registrar is satisfied by proper evidence that the person claiming is entitled to it; and any appeal from the decision of the registrar may be decided by the council; and any entry proved to the satisfaction of the council to have been fraudulently or incorrectly made, may be erased from the register by an order in writing of the council.

2. In the event of the registrar being dissatisfied with the evidence adduced by the person claiming to be registered, he shall have the power, subject to an appeal to the council, of refusing the said registration until the person claiming to be registered has furnished such evidence duly attested by oath or affirmation, before the judge of the county court of any county.

XXXIV. Any registered medical practitioner who has been convicted of any felony in any court shall thereby forfeit his right to registration, and by direction of the council, his name shall be erased from the register; or in case a person known to have been convicted of felony presents himself for registration, the registrar shall have power to refuse such registration.

#### *Rights of Registered Practitioners.*

XXXV. Every person registered under the provisions of this act shall be entitled according to his qualification or qualifications to practice medicine, surgery, or midwifery, or any of them as the case may be, in the Province of Ontario, and to demand and recover in any court of law, with full costs of suit, reasonable charges for professional aid, advice, and visits, and the cost of any medicine or other medical or surgical appliances rendered or supplied by him to his patients.

#### *Publication of Register.*

XXXVI. The registrar of the council shall from time under the direction of the council caused to be printed and published a correct register of the names in alphabetical order according to the surnames, with the respective residences together with the medical titles, diplomas and qualifications conferred by any college or body with the dates thereof of all persons appearing on the register as existing on the day of publication; and such register shall be called "The Ontario Medical Register;" and a copy of such register for the time being purporting to be so printed and published as aforesaid, shall be *prima facie* evidence in all courts, and before all justices of the peace, and others, that the persons therein specified are registered according to the provisions of this act, and, subject to the provisions of sub-section two of this section; the absence of the name of any person from such copy shall be *prima facie* evidence that such person is not registered according to the provisions of this act.

2. In the case of any person whose name does not appear in such copy, a certified copy under the hand of the registrar of the council, of the entry of the name of such person on the register, shall be evidence that such person is registered under the provisions of this act.

#### *Offenses and Penalties.*

XXXVII. Any person entitled to be registered under this act, but who neglects or omits to be so registered shall not be entitled to any of the rights or privileges conferred by registration under the provisions of this act, so long as such neglect or omission continues, and he shall be liable to all the penalties imposed by this act, or by any other act in force against unqualified or unregistered practitioners.

XXXVIII. If the registrar makes or causes to be made any wilful falsification in any matter relating to the register, he shall incur a penalty of fifty dollars, and shall be disqualified from again holding that position.

XXXIX. If any person procures or causes to be procured his registration under this act, by means of any false or fraudulent representation or declaration, either verbally or in writing, it shall be lawful for the registrar, upon the receipt of sufficient evidence of the falsity or fraudulent character of such representation or declaration, to represent the matter to the council, and upon the written order of the president, attested by the seal of the college, to erase the names of such persons from the register, and to make known the fact and cause of such erasure by notice to be published in the *Ontario Gazette*; and after such notice has appeared the person whose name has been erased as aforesaid shall cease to be a member of the College of Physicians and Surgeons of Ontario, and shall cease to enjoy any of the privileges conferred by registration under this act at any future time, without the express sanction of the council.

2. If any person wilfully procures or attempts to procure himself to be registered under this act, by making any false or fraudulent representation or declaration, either verbally or in writing, he shall on conviction thereof before any justice of the peace incur a penalty not exceeding one hundred dollars; and every person knowingly aiding and assisting him therein shall on conviction thereof incur a penalty of not less than twenty nor more than fifty dollars for each such offence.

XL. It shall not be lawful for any persons not registered to practice medicine, surgery, or midwifery for hire, gain, or hope of reward; and if any person not registered pursuant to this act for hire, gain, or hope of reward practices or professes to practice medicine, surgery, or midwifery or advertises to give advice in medicine, surgery, or midwifery, he shall upon a summary conviction thereof before any justice of the peace, for any and every such offence pay a penalty not exceeding one hundred dollars nor less than twenty-five dollars.

XLI. Any person who wilfully or falsely pretends to be a physician, doctor of medicine, surgeon or general practitioner, or assumes any title, addition, or description other than he actually possesses and is legally entitled to, shall be liable on conviction thereof before a justice of the peace to a penalty not exceeding fifty dollars, nor less than ten dollars.

XLII. Any person not registered pursuant to this act, who takes or uses any name, title, addition or description implying or calculated to lead people to infer that he is registered under this act, or that he is recognized by law as a physician, surgeon, accoucheur, or a licentiate in medicine, surgery or midwifery, shall be liable, upon a summary conviction thereof before any justice of the peace, to pay any penalty not exceeding one hundred dollars, nor less than twenty-five dollars.

XLIII. No person shall be entitled to recover any charge in any court of law for any medical or surgical advice, or for attendance, or for the performance of any operation, or for any medicine which he may have prescribed or supplied, unless he is registered under this act; but this section shall not extend to the sale of any drug or medicine by any duly licensed chemist or druggist.

XLIV. No person shall be appointed as medical officer, physician or surgeon in any branch of the public service of this Province, or in any hospital or other charitable institution not supported wholly by voluntary contributions, unless he is registered under the provisions of this act.

XLV. No certificate required by any act now in force, or that may hereafter be passed, from any physician or surgeon or medical practitioner, shall be valid unless the person signing the same is registered under this act.

XLVI. Any prosecution under this act may be brought or heard before any one or more of Her Majesty's justices of the peace having jurisdiction where any such offence has been committed; and such justice or justices may award payment of costs in addition to the penalty; and in case the penalty or costs awarded by him or them are not, upon conviction, forthwith paid, may commit the offender to the common gaol, there to be imprisoned for any term not exceeding one month, unless the penalty and costs are sooner paid.

XLVII. All prosecutions against any one acting in contravention of the provisions of this act, shall take place in accordance with *The Act respecting Summary Convictions before Justices of the Peace*.

XLVIII. Any person convicted under this act, who gives notice of appeal against the decision of the convicting justice, shall be required, before being released from custody, to give said justice satisfactory security for the amount of the penalty, costs of conviction, and appeal.

XLIX. In any trial under this act the burden of proof as to the registration shall be upon the person charged.

L. In all cases where proof of registration under this act is required to be made, the production of a printed or other copy of the register, certified under the hand of the registrar of the council, for the time being, shall be sufficient evidence of all persons who are registered practitioners, in lieu of the production of the original register; and any certificate upon such printed or other copy of the register, purporting to be signed by any person in his capacity of registrar of the council under this act, shall be *prima facie* evidence that such person is such registrar, without any proof of his signature or of his being in fact such registrar.

LI. Every prosecution under this act shall be commenced within one year from the date of the alleged offence.

LII. The council, by an order signed by the president, having the seal of the college appended thereto, may stay proceedings in any prosecution under this act where it is deemed expedient.

LIII. All penalties recoverable under this act shall be paid to the convicting justice, and by him be paid to the registrar of the college, and shall form part of the funds thereof. (2.) Any person may be prosecutor or complainant under this act, and the Council may allot such portion of the penalties recovered as may be expedient towards the payment of such prosecutor.

LIV. All moneys forming part of the council funds shall be paid to the treasurer, and may be applied to carry this act into execution.

IV. The words "legally qualified medical practitioner," or "duly qualified medical practitioner," or any other words importing legal recognition of any person as a medical practitioner or member of the medical profession, when used in any act or law shall, in so far as such act or law applies to this Province, be construed to mean a person registered under this act.

Assented to March, 1878.



Dr. P. H. BRYCE, Secretary of the Provincial Board of Health, writes: "Regarding your question whether all schools are embraced under the terms of the act, I may state that only allopaths and homeopaths are recognized. Both have to pass the same examination on all subjects except materia medica and therapeutics."

"Students who may have obtained degrees from any of the provincial schools or colleges, are required to pass the same uniform examination, held by the Medical Council, who have the power of granting licenses to practice, of registration, and of prosecuting irregulars. They are incorporated, and receive their powers from an act of the Legislature."

"There has been more or less disturbance regarding alleged arbitrary acts on the part of members of examining boards towards students, but this has largely passed away, while the benefits accruing from a high standard and uniformity in examinations are now recognized on all hands."

Neither this act nor the Quebec act seems to confer the power of revoking the licenses of such members as are guilty of unprofessional or dishonorable conduct.

#### MEDICAL FACULTY OF TORONTO UNIVERSITY.

Toronto, Ont.

Organized in 1849. Extinct since 1852.

#### TORONTO SCHOOL OF MEDICINE.

*(Affiliated with the University of Toronto and the University of Victoria College.)*

Toronto, Ont. (Pop. 86,415.)

Organized in 1843. Degrees were first conferred on its students, by affiliated universities, in 1845. Degrees have been so conferred each subsequent year.—Faculty embraces ten professors (lecturers), five adjunct professors, and two demonstrators. One session of twenty-four weeks' duration annually.

**COURSE OF INSTRUCTION:** The course is graded, and extends over four years.—Lectures embrace the principles and practice of medicine and surgery, anatomy, midwifery, diseases of women and children, materia medica, therapeutics, physiology, medical jurisprudence, toxicology, dermatology, histology, pathology, ophthalmology, otology, botany, and zoology.

**REQUIREMENTS:** For admission, certificate of having passed a provincial matriculation, or the matriculation examination of any of the affiliated universities, or a college diploma.—For graduation: attendance and successful examinations on lectures as follows—anatomy, physiology, theoretical chemistry, materia medica, therapeutics, principles and practice of medicine and surgery, midwifery, diseases of women and children; one course of medical jurisprudence, practical chemistry and botany; (2) four years' study; (3) eighteen months' hospital practice; (4) six cases of midwifery; (5) twenty-one years of age.

**FEES:** Registration, \$5; lectures, \$125; final examination, \$30.

**STUDENTS:** Only the number of matriculates (33) for 1881-82, and of the graduates (19) for 1882-83, have been received.

Graduates of Toronto University in Illinois, 10; of Victoria University in Illinois, 14.

#### TRINITY MEDICAL SCHOOL.

*(Affiliated with the University of Trinity College, the University of Toronto and the University of Manitoba.)*

Toronto, Ont.

Organized in 1850.—The faculty embraces ten professors, two demonstrators and a lecturer.—The school confers only the degree of Fellow of the Trinity Medical School. The majority of students obtain degrees from affiliated universities.

**COURSE OF INSTRUCTION:** One annual session of twenty-four weeks' duration. Course graded and extends over four years.—Lectures embrace the principles and practice of medicine and surgery, materia medica, therapeutics, anatomy, obstetrics, diseases of women and children, chemistry, botany, sanitary science, medical jurisprudence, physiology, histology, pathology, ophthalmology, otology, laryngology. Two examinations are held during the course, viz: at the close of the second and fourth years.

**REQUIREMENTS:** For admission, (a) certificate of matriculation from one of the provincial boards, (b) matriculation examination on English language, arithmetic, algebra, geometry, Latin and either Greek, French, German or Natural Philosophy. Correct spelling and legible writing are imperative. Students from countries where a matriculation examination is not required by law are admitted to the lectures without examination.—For graduation: (1) four years of study, (2) at least three courses of lectures of twenty-four weeks' duration; (3) twenty-one years of age; (4) good moral character; (5) six months' practice at lying-in-hospital and six cases of labor; (6) satisfactory examination on all required branches; (7) satisfactory thesis.



**FEES:** Lectures, \$153; full fee, including examinations, for gradation, \$24.

**STUDENTS:** Number of matriculates and of graduates at each session reported and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1878-79	137	35	25.5
1879-80	136	30	22+
1880-81	136	30	22+
1881-82	168	35	20.7
1882-83	205	38	18.5

Average percentage of graduates to matriculates during the past five years, *twenty-one*.

**REMARKS:** The number of graduates given above includes, also, "men licensed by the Council." Dr. W. B. Geikie, Dean of the faculty, writes: "We have (I) Degree holders; (II) Fellowship diploma holders; (III) Medical Licentiates from the Council—in our classes yearly, all of whom are well-educated medical men."

#### ROYAL COLLEGE OF PHYSICIANS AND SURGEONS.

(*Medical Department of Queen's University.*)

Kingston, Ont. (Pop. 14 691.)

Organized in 1854. First class graduated in 1855. Classes graduated in each subsequent year.—Faculty embraces twelve professors and two demonstrators.

**COURSE OF INSTRUCTION:** One course of lectures, annually, of twenty-four weeks' duration. The course is graded, and extends over three or four years, and includes principles and practice of surgery, theory and practice of medicine, obstetrics and diseases of women and children, physiology, anatomy, chemistry, materia medica, therapeutics and pharmacy, two full courses; microscopic anatomy, twenty-five lectures; clinical surgery, clinical medicine, medical jurisprudence, one-half course; sanitary science, practical chemistry, botany, three months' course; hospital, eighteen months. Instruction is given by lectures, recitations and clinical teaching, in every branch, the instruction being as practical as possible.

**REQUIREMENTS:** For admission, (a) college diploma, or (b) evidence of having passed the Provincial Board's matriculation examination, or (c) matriculation examination on (1) English language, including grammar and composition, arithmetic, algebra, geometry, Latin, Greek, French, German or physics.—For graduation: (1) twenty-one years of age, (2) good moral character, (3) thesis, (4) successful passing of all examinations, (5) certificate of having attended not fewer than six cases of midwifery.

**FEES:** Lectures, \$114; diplomas, \$30; hospital, \$4.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	48	10	20.8
1878-79	—	14	—
1879-80	—	12	—
1880-81	68	15	22+
1881-82	—	16	—
1882-83	48	11	23—

Average percentage of graduates to matriculates during the years 1877-78, 1880-81, 1882-83, *twenty-two*.

Number of graduates in Illinois, 2.

#### MEDICAL DEPARTMENT OF VICTORIA COLLEGE.

(*Also known as "Rolph's School."*)

Toronto, Ont.

Organized 18—. Extinct since 1872.

#### MEDICAL DEPARTMENT OF THE WESTERN UNIVERSITY.

London, Ont., (Pop. 19 746).

Organized in 1882. First class graduated in 1883. Faculty embraces fifteen professors and two demonstrators of anatomy.

**COURSE OF INSTRUCTION:** One annual graduating session of six months' duration. The course is graded, extending over three sessions in different years.—Lectures embrace anatomy, physiology, obstetrics, diseases of women and children, chemistry, therapeutics, botany, nervous and mental diseases, principles and practice of medicine, surgery, histology, pathology, sanitary science, medical jurisprudence, toxicology.

**REQUIREMENTS:** For admission, (a) certificate of graduation or matriculation in any recognized British University; (b) certificate of having passed the provincial examination; (c) matriculation examination on English language, arithmetic, algebra, geometry, Latin, writing and dictation. Correct spelling and legible writing are imperative. For graduation: (1) certificate of having passed a recognized matriculation examination; (2) four years' study; (3) three sessions of six months each upon anatomy, practical anatomy, practice of medicine, surgery, theoretical chemistry, midwifery, diseases of women and children, materia medica, therapeutics, physiology, clinical medicine, clinical surgery; one six months' course on medical jurisprudence; one three months' course on botany; twenty-five lectures on chemistry and toxicology; twenty-five practical demonstrations on histology and pathology; twenty lectures on sanitary science; (5) attendance for at least eighteen months on the practice of some recognized hospital; (6) six months attendance on the practice of a lying-in hospital, and charge of six cases of confinement; (7) compounded medicines for six months; (8) good moral character; (9) twenty-one years of age.

**FEES:** Matriculation, \$5. Registration and lectures, \$92. Graduation, \$25.

**STUDENTS:** First session (1882-'83); matriculates, 15; graduates 1; percent. of graduates to matriculates, *seven*.

**REMARKS:** Students attending this, and other Canadian colleges, are regulated by the following rules:

1. In the case of disorderly conduct, any student may, at the discretion of the professor, be required to leave the class-room. Persistence in any offence against discipline, after admonition by the professor, shall be reported to the dean of the faculty. The dean may, at his discretion, reprimand the student, or refer the matter to the faculty at its next meeting, and may in the interval suspend from classes,

2. Absence from any number of lectures can only be excused by necessity or duty, of which proof must be given, when called for, to the faculty. The number of times of absence, from necessity or duty, that shall disqualify for the keeping of a session, shall in each case be determined by the faculty.

3. While in the college, students are expected to conduct themselves in the same orderly manner as in the class-rooms.

4. When students are brought before the faculty under the above rules, the faculty may reprimand, impose fines, disqualify from competing for prizes and honors, suspend from classes, or expel from the college.

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#### WOMAN'S MEDICAL COLLEGE. (*Homeopathic*.)

Toronto, Ont.

Organized in 1883.—The faculty embraces ten professors and a demonstrator.

**COURSE OF INSTRUCTION:** One course of six months' duration will be given annually. The course is graded and extends over three years.—Lectures will embrace the principles and practice of medicine and surgery, obstetrics, diseases of women and children, materia medica, botany, anatomy, microscopy, sanitary science, medical jurisprudence, toxicology, chemistry, ophthalmology and otology.

**REQUIREMENTS:** For admission, certificate of having passed the matriculation examination of the provincial board.—For graduation: (1) four years' study; (2) four courses of lectures of six months' duration, if a graduate in arts three courses; (3) two courses of six months each upon anatomy, dissection, physiology, histology, chemistry, materia medica, therapeutics, principles and practice of medicine and surgery, midwifery, diseases of women and children, and clinical medicine and surgery; one six months' course on medical jurisprudence; one course of three months upon practical chemistry, toxicology, botany, pathology and hygiene; (4) dissect the whole human body; (5) six months' practice in compounding medicines; (6) twenty-four months' attendance on hospital; (7) six cases of midwifery.

**FEES:** Registration, \$5. Lectures, \$100.

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#### WOMEN'S MEDICAL COLLEGE.

Kingston, Ont.

Organized in 1883, the Royal College of Physicians and Surgeons, Kingston, having, at the close of the last session, announced that women students would no longer be received in its classes.—The faculty embraces seven professors, in addition to which two professors of Queen's College give instruction in chemistry and botany.

**COURSE OF INSTRUCTION:** The course of lectures, which will continue for six months each session, "will be equivalent in all respects to the ordinary winter course delivered in other medical colleges, and as such will be accepted in proceeding to the degree of M. D. in Queen's University," with which the Women's Medical is affiliated.—Lectures embrace obstetrics and diseases of women and children; principles and practice of surgery; materia medica and therapeutics; medical jurisprudence and sanitary science; theory and practice of medicine; institutes of medicine and histology; anatomy, descriptive and surgical; chemistry; botany; practical anatomy; clinical surgery; clinical medicine.

**REQUIREMENTS:** "The requisites for graduation will in no sense differ from what is required for the other sex, and the facilities for study will be also the same.

"By the regulations of the University, the matriculation examination of the college may be passed at any time before undergoing examination for the degree. The Medical Council matriculation, which is the intermediate examination of the High Schools with Latin, will be accepted by the University."

**FEES:** Registration, \$5. Lectures, hospital, etc., \$124. Degree of M. D., \$30.

## Quebec, Province of.

Population, 1358 469 (census of 1881). Number of physicians, 1051 (Quebec Medical Register). Number of inhabitants to each physician, 1292.

**AN ACT** to further amend and consolidate the Act relating to the Profession of Medicine and Surgery in the Province of Quebec.

Whereas, it is necessary to further amend and consolidate the laws now in force in the Province of Quebec, for regulating the qualifications and examinations of candidates for the study of medicine, surgery and midwifery; for the regulation of medical practitioners, and for the infliction of penalties upon persons infringing the provisions of this act respecting the practice of medicine, surgery and midwifery; therefore, Her Majesty, by and with the advice and consent of the Legislature of Quebec, enacts as follows:

**SECTION 1.** From and after the passing of this act, the act or ordinance of the Legislative Council of the late Province of Quebec, passed in the twenty-eighth year of the reign of his late Majesty, King George the Third, and entitled An act or ordinance to prevent persons practicing physic and surgery within the Province of Quebec or midwifery within the towns of Quebec and Montreal, without license, and all other acts or parts of acts in any manner relating to the practice of medicine, surgery or midwifery in the Province of Quebec, or in any manner relating to the mode of obtaining license to practice medicine, surgery or midwifery therein, as well as the act 40 Viet., Chap. 26, entitled "An act to amend and consolidate the acts relating to the profession of medicine and surgery in the Province of Quebec," assented to on the 28th of December, 1876, shall be and are hereby repealed, except in so far as relates to any offense committed against the same or any of them, before the passing of this act, or any penalty or forfeiture incurred by reason of such offense.

§ 2. All persons resident in the Province of Quebec, authorized to practice medicine, surgery or midwifery therein, and who, at the time of the passing of the present act, shall have been registered under the act 40 Viet., chap. 26, and all persons resident in the Province of Quebec, and licensed to practice medicine, surgery and midwifery therein, who, at the time of the passing of this act, shall not have been registered under 40 Viet., chap. 26, but who shall hereafter become registered under the present act, and all persons who may hereafter obtain a license to practice medicine, surgery or midwifery, in this Province, and become registered under the present act, shall be and are hereby constituted a body politic and corporate by the name of The College of Physicians and Surgeons of the Province of Quebec, and shall, by that name, have perpetual succession, and a common seal, with power to change, alter, break or make new the same; and they and their successors, by the name aforesaid, may sue and be sued, implead and be impleaded, answer and be answered unto in all courts and places whatsoever, and, by the name aforesaid, shall be able and capable in law to have, hold, receive, enjoy, possess and retain for the ends and purposes of this act, and for the benefit of the said college, all such sums of money as have been or shall at any time hereafter be paid, given or bequeathed to and for the use of the said college; and by the name aforesaid, shall and may, at any time hereafter, without any letters of mortmain, purchase, take, receive, have, hold, possess and enjoy any lands, tenements or hereditaments, or any estate or interest derived or arising out of any lands, or tenements, or hereditaments, for the purposes of the said college, and for no other purposes whatever; and may sell, grant, lease, demise, alienate or dispose of the same, and do or execute all and singular the matters and things that to them shall or may appertain to do; provided, always, that the real estate so held by the said corporation, shall at no time exceed in value the sum of twenty thousand dollars.

The said corporation shall have two places of business, one office in the city of Quebec and the other in the city of Montreal, which shall be in the offices of the secretaries of the college appointed in virtue of article 1, chapter 2, of its statutes, by-laws and regulations.

Service upon the said corporation shall be effected at either of such offices indifferently, by speaking to a person employed therein, and in all proceedings the domicile of the corporation shall be sufficiently designated by the following words: "having a place of business in each of the cities of Quebec and Montreal."



From and after the passing of this act, the persons who compose the College of Physicians and Surgeons, shall be called, "Members of the College of Physicians and Surgeons of the Province of Quebec."

§ 4. The affairs of the said college shall be conducted by a board of governors, forty in number, and chosen, as hereinafter set forth, for three years, viz: fifteen shall be chosen from amongst the members resident in the District of Montreal, three from amongst the members resident in the District of Three Rivers, and three from amongst the members resident in the District of St. Francis; and of the members of the said board of governors, not less nor more than eight shall reside in the city of Quebec, and not less nor more than ten shall reside in the city of Montreal; provided, always, that the University of Laval, at Quebec, shall name two, and the same shall be chosen from amongst the members of said college, residing in the city of Quebec; the University of Laval, at Montreal, shall name two; the University of McGill, two; the University of Bishop's College, two; and the incorporated School of Medicine and Surgery, of Montreal, affiliated with the University of Victoria College, or with any other British University, two; which said nominated governors shall be chosen from amongst the members of the said College of Physicians and Surgeons residing in the city of Montreal; provided that, at any time, the city of Montreal shall not have more than ten governors, and the city of Quebec eight.

The governors to be appointed by the institutions mentioned in this section shall not require to have their appointment confirmed or approved by the said college, but on presenting their certificates of nomination, shall have the right to take their seats and enter upon their functions. In case any of the universities, colleges or incorporated medical schools now existing in the Province of Quebec, should cease to have its students taught the science of medicine, the power of appointing delegates as hereinbefore provided shall cease *ipso facto*, and can only be revived when such institutions or any of them shall *bona fide* resume their teaching.

At each election of the board of governors, every member of the said corporation shall have the right of voting by proxy.

2. Of the aforesaid districts, the district of Quebec shall comprise the present judicial districts of Quebec, Gaspé, Saguenay, Chicoutimi, Rimouski, Montmagny, Beauce and Kamouraska; the district of Montreal shall comprise the present judicial districts of Montreal, Terrebonne, Joliette, Richelieu, Bedford, St. Hyacinthe, Iberville, Beauharnois, and Ottawa; the district of Three Rivers shall comprise the present judicial districts of Three Rivers and Athabaska; and the district of St. Francis shall consist of the present judicial district of St. Francis.

3. The members of the board of governors shall be elected for a period of three years, but any member may resign his appointment at any time, by letter addressed to the secretary of the said board; and upon the death or resignation of any member of the said board, it shall be the duty of the secretary forthwith to notify the university or body wherein such vacancy may occur, of such death, resignation or removal, and such university or body shall have the power to nominate another duly qualified person to fill such vacancy; or, if the vacancy be caused by the death, resignation or removal from the electoral city or district of any member elected from the electoral cities or districts, the board of governors shall fill up such vacancy from amongst the eligible members of the college in the city or district where such vacancy shall have occurred, by an election by ballot, at the next ensuing meeting subsequent to the occurrence of such vacancy; and in the event of any vacancy occurring in the said board of governors in consequence of any of the said institutions ceasing to teach, the place of said governor shall be filled in the same manner, from amongst the members of the said college residing in the city wherein such institution was located during the suspension of such institution to teach, as hereinbefore set forth; and it shall be lawful for the board of governors to exercise, during any such vacancy, the powers of the board hereinafter mentioned.

§ 5. The said board of governors shall be, and are hereby constituted, "The Provincial Medical Board," and in such capacity they shall meet to perform the several duties devolving upon them under this act, as the board of governors of the college, not less than twice in each year, at such time and place as by them shall be deemed most fit, and on which occasions seven shall be a quorum, for the transaction of business.

§ 6. From and after the passing of this act, no person shall practice medicine, surgery or midwifery, in the Province of Quebec, unless he shall have obtained a license from the Provincial Medical Board, which is hereby authorized to issue such license; and unless it be enregistered in accordance with the provisions of this act.

§ 7. Every person who has obtained or may hereafter obtain, a medical degree or diploma in any university or college, mentioned in sec. 4 of this act, shall be entitled to such license, without examination as to his medical knowledge and skill; provided that such diploma shall have only been given after four years of study of the medical profession, from the date of his admission to study, and according to the requirements of the existing law; provided, also, that the Provincial Medical Board shall have the power to grant the same privilege to holders of degrees or diplomas of medicine and surgery from other British, Colonial or French Universities or Colleges.

§ 8. From and after the passing of this act, no person shall be admitted as a student of medicine, surgery or midwifery, unless he shall have obtained a certificate of qualification from the said Provincial Medical Board. And no one shall be entitled to the license of the college, on presentation of a diploma, unless he shall have been previously admitted to the study of medicine, in accordance with the provisions of this act, or unless he shall have passed an equivalent preliminary examination before a college, school or board, authorized by law to require and cause such preliminary examinations to be passed in Her Britannic Majesty's possessions, elsewhere than in the Province of Quebec, and acceptable to the board created by this act.



§ 9. At the first regular meeting of said board, after the passing of this act, there shall be appointed by the Provincial Medical Board, for three years, (subject always to the approval of the board, four persons actually engaged in the work of general education in the Province of Quebec, to examine all persons about to begin the study of medicine, surgery or midwifery, or the subjects of general education hereinafter mentioned, as belonging to the preliminary qualifications of medical students, viz: one examiner of French and one of English nationality for the city of Montreal, and one of French and one of English nationality for the city of Quebec. The subjects of the preliminary qualifications to be English and French, Latin, geography, history, arithmetic, algebra, geometry, belles-lettres, and any one of the following subjects: Greek, natural or moral philosophy; and the candidates to present a certificate of good moral character; provided, that all medical students who, before the passing of this act, shall have passed their preliminary examination, before the examiner or examiners of any university, incorporated school of medicine or Provincial Medical Board, shall not be required to pass before the examiners mentioned in this section.

§ 10. Every person wishing to obtain a license to practice medicine, surgery and midwifery in this Province, and to be registered under this act, and who shall not have obtained a degree or diploma in medicine, surgery and midwifery, from any of the institutions mentioned in section 4 of this act, shall, before being entitled to such license, and to registration in this Province, pass an examination as to his knowledge and skill for the efficient practice of medicine, surgery and midwifery before this board; and, upon passing the examination required, and proving to the satisfaction of the examiners that he has complied, in an institution for the teaching of medicine, in Her Majesty's Dominions, with the rules and regulations made by the Provincial Board, and on payment of such fees as the board may, by general by-law, establish, such person shall be entitled to a license to practice medicine, surgery and midwifery in the Province of Quebec.

§ 11. All persons coming from any recognized college outside of Her Majesty's Possessions, and who are desirous of obtaining a license from the college, must previously pass the preliminary examination, before the examiners appointed by the Provincial Medical Board, or establish, to the satisfaction of the board, that they have already passed an equivalent examination; they must, moreover, follow, in one of the schools of medicine in this province, a complete course (for six months) of lectures, and such other course or courses as shall be necessary to complete the curriculum required by the Board; they shall also pass a professional examination before the Provincial Medical Board. Such persons may pass their professional examination immediately after their preliminary examination.

§ 12. The said Board of Governors of the College of Physicians and Surgeons shall have power—

1. To regulate the study of medicine, surgery and midwifery, by making rules with regard to the preliminary qualifications, duration of study, curriculum to be followed, and the age of the candidate applying for a license to practice; provided, always, that such rules shall not be contrary to the provisions of this act.

2. To examine all credentials, all certificates of admission to study or of attendance at lectures, and all other documents purporting to entitle the bearer to a license to practice, and all diplomas, degrees or other qualifications sought to be registered in this Province, and to oblige the bearer thereof to attest on oath (to be administered by the chairman for the time being,) that he is the person whose name is mentioned therein, and that he became possessed thereof legally.

3. To cause every member of the profession now practicing, or who may hereafter practice in the Province of Quebec, to register his name, age, place of residence and nativity, the date of his license and the place where he obtained it, in the books of the college.

4. To fix the period of probation which persons must undergo before being eligible for election as governors of the college, which period shall not be less than four years; and to make all such rules and regulations for the government and proper working of the said corporation, and the election of a president and officers thereof, as to the board of governors may seem meet and expedient, which said rules and regulations shall, before they shall come into effect, be sanctioned by the Lieutenant Governor of this province, after the same shall have been submitted to him for approval, and by him allowed.

§ 13. The Provincial Medical Board shall, from time to time, as occasion may require, make rules and regulations:

1. For the guidance of the examiners, and to prescribe the subject and mode of the examinations, the time and place of holding the same, and generally shall make all such rules and regulations in respect of such examinations, not contrary to the provisions of this act, as they may deem expedient and necessary.

2. To regulate the study of medicine, surgery and midwifery, with regard to the preliminary qualifications, duration of study and curriculum of studies to be followed by the students; provided, always, that such rules shall not be contrary to the provisions of this act, and that any change in the curriculum of studies fixed by the board, shall not come into effect until one year after such change is made.

3. To appoint assessors either out of its own body, or from among the registered members of the college, to visit and attend the medical examinations of the various universities, colleges and incorporated schools of the Province, and to report to the Provincial Board, upon the character of such examinations; but such assessors shall not be chosen out of any of the teachers in any one of the said universities or incorporated schools, and should such report be, at any time, unfavorable to any university, college or incorporated school, the Provincial Board shall, in such cases, and under such circumstances, have the power to refuse the license and the registration of the degrees or diplomas of the institutions so reported upon, until such examinations shall have been

amended. For such purposes the Provincial Board shall appoint or elect assessors, two or more of whom shall attend the examinations at each university, college or incorporated medical school, in accordance with the by-law to be hereafter passed by the board. It shall be the duty of the above institutions to notify the Provincial Board of the time or times at which their examinations shall be held, at least one month previous to such examinations.

4. To make tariffs of rates to be charged in towns and country for medical, obstetrical or surgical advice, or for attendance, or for the performance of any operation, or for any medicines which shall have been prescribed or supplied.

5. Such a tariff, to be valid, must be approved by the Lieutenant Governor of the Province of Quebec, in Council, and can only come into force six months after the publication of such tariff, as well as of the order in council approving the same, at least once in the Quebec Official Gazette. Such tariff shall not, in case of suit, obviate the necessity of proof of the giving of advice, care, prescriptions, medicines and other things therein mentioned, according to the laws then in force.

§ 14. The Provincial Medical Board shall have the power to fix by by-law, the salary or fees to be paid to the officers, to the examiners and the assessors appointed by the said board; as well, also, the fees to be paid by all candidates entering on the study of medicine, as also by all candidates for license to practice medicine, surgery and midwifery, as well as the fees to be paid for registration; and the said board may dispose of all fees received in whatever manner they may think most conducive to the interests of the college.

§ 15. The qualifications to be required from a candidate for obtaining a license, authorizing him to practice medicine, surgery and midwifery, shall consist in his holding a certificate of study from a licensed physician, for the period intervening between the course of lectures which he has followed; that he is not less than twenty-one years of age; that he has followed his studies during a period of not less than four years, commencing from the date of his admission to the study of medicine by this board, and that, during the said four years, he shall have attended, at some university, college or incorporated school of medicine, within Her Majesty's dominions, not less than two six months' courses of general or descriptive anatomy, of practical anatomy, of surgery, of practice of medicine, of midwifery, of chemistry, of materia medica and general therapeutics, of the institutes of medicine, of physiology and general pathology; of clinical medicine and of clinical surgery, one six months' course or two three months' courses; of medical jurisprudence and of hygiene, one three months' course; of botany, one three months' course, and a course of not less than twenty-five demonstrations, upon microscopic anatomy, physiology and pathology; also, that he shall have attended the general practice of a hospital in which are contained not less than fifty beds, under the charge of not less than two physicians or surgeons, for a period of not less than one year and a half, or three periods of not less than six months each; and that he shall also have attended six cases of labor, and compounded medicines for six months. And to remove all doubts with regard to the number of lectures which the incorporated schools of medicine of the Province of Quebec are bound to give, it is enacted and declared, that each six months' course shall consist of one hundred and twenty lectures, except in the case of clinical medicine, clinical surgery and medical jurisprudence. Of the four years' study required by this act, three six months' sessions at least shall be passed in attendance upon lectures at a university, college or incorporated school of medicine recognized by this board, the first whereof shall be so passed the session immediately succeeding the preliminary examination, and the last during the fourth year of study, and the candidate shall undergo an examination on the final subjects of the curriculum, at the end of the session in his fourth year of study.

§ 16. All persons obtaining the license to practice from the College of Physicians and Surgeons of the Province of Quebec, shall be styled members of the said college, but shall not be eligible as governors within a period of four years from the date of their admissions as members; and the said election of governors shall be made under such rules and regulations therefor and in such manner as the board of governors shall ordain. The members of the college shall pay the sum of two dollars a year for the use of the college.

§ 17. The Provincial Medical Board shall have the power to make rules and regulations respecting the admission of females to the study and the practice of midwifery in the Province, and shall determine the degree, the nature and extent of knowledge and qualifications required from women who wish to practice midwifery. *Provided always*, that all females who, at the time of the passing of this act, shall have been legally qualified to practice as midwives in this Province, shall retain that right, but shall be required to conform to such rules and regulations as may hereafter be made by the College of Physicians and Surgeons of Quebec respecting them. Nothing in this section or in the by-laws which may be made shall prevent, as it occurs often, women in the country from practicing midwifery or assisting midwifery without being admitted to the study or the practice of midwifery; but they must obtain a certificate from a duly licensed physician ascertaining that they have the necessary knowledge.

§ 18. The Provincial Medical Board shall cause to be kept by the registrar a book to be called Register, in which shall be entered, from time to time, the names of all persons who shall have been duly licensed and registered under the act 40 Viet., chap. 26, or under this act, and who shall have complied with the enactments hereinafter contained, and with the rules or regulations made or to be made by the Provincial Medical Board respecting the qualifications to be required from practitioners of medicine, surgery and midwifery in the Province of Quebec; and those persons only whose names have been, or shall hereafter be, inscribed in the register above mentioned, shall be deemed to be qualified and licensed to practice medicine, surgery and midwifery in the Province of Quebec. And such register shall at all times be open and subject to inspection by any duly registered practitioner in the Province, or by any other person.

§ 19. It shall be the duty of the registrar to keep the register correctly, in accordance with the provisions of this act, and the orders and regulations of the Provincial Medical Board; and he shall, from time to time, make the necessary alterations in the addresses or qualifications of the persons registered under this act; and the said registrar shall perform such other duties as shall be imposed upon him by the Provincial Medical Board.

§ 20. The registrar of the college, under the direction of the board of governors, shall cause to be printed and published, and distributed to the members of the college, from time to time, a copy of the register of the said names, which he shall place in alphabetical order, inserting the names and surnames, respective residences, medical titles, diplomas and qualifications conferred by the college or other medical body, with the dates of the same, of the persons appearing on the then existing register at the date of such publication, and such register shall be called the "Quebec Medical Register;" and a printed copy of such register, certified under the hand of such registrars as such, shall be *prima facie* evidence before all courts, and all justices of the peace and others, that the persons therein named and entered have been registered in accordance with the provisions of said act; and the absence of the name of any person from such copy shall be *prima facie* proof that such person has not been registered in accordance with the requirements of the said act: *Provided always*, that in such case, where a person's name does not appear on such printed copy, a copy or an extract from the register, certified by the registrar of the college, of the entry of such person's name on the register, shall be proof that such person is registered in accordance with the provisions of the present act. And a certificate, under the hand of the registrar, that any member whose name appears on the register has paid his annual contributions to the college, shall be received in all courts of justice as *prima facie* evidence that such payments have been made.

§ 21. If the registrar be convicted of a felony, he shall be disqualified from again holding any office in the college.

§ 22. Every member of the medical profession who, at the time of the passing of this act, may be possessed of a license from the College of Physicians and Surgeons of Lower Canada, to practice medicine, surgery and midwifery in the Province of Quebec, and who shall not have been registered under the act 40 Vict., chap. 26, shall, on the payment to the registrar of the fee of one dollar, and of all annual dues and contributions by him due and payable to the heretofore College of Physicians and Surgeons of this Province, enacted under the act 40 Vict., chap. 26, be entitled to be registered, and is obliged to cause himself to be so registered, on producing to the registrar the documents conferring or evidencing the qualification, or each of the qualifications, in respect whereof he seeks to be so registered, or upon transmitting, by post, to such registrar, information of his name and address, and evidence of the qualifications in respect whereof he seeks to be registered, and of the time or times at which the same was or were respectively obtained.

§ 23. Any person required or entitled to be registered under this act, and who shall neglect or omit to be so registered, shall not be entitled to practice medicine, surgery, or midwifery, or to claim any of the rights and privileges conferred by this act, and shall be liable to all the penalties imposed by this act, or by any other act, upon any person practicing medicine, surgery or midwifery, without being registered as required by the said act.

§ 24. Any person who has attended medical lectures, during three sessions of any medical school in the British Dominions, and who has been actually engaged in the practice of the profession of medicine for a period of over thirty years in this Province, may, on proof of these facts to the satisfaction of the Provincial Medical Board, and who produces, moreover, a certificate, signed by two resident medical practitioners in the neighborhood where he has practiced, that he has succeeded in his profession, and is entitled to the consideration of the board, be entitled to a license to practice medicine, surgery and midwifery in this Province, and to registration without examination.

§ 25. No person, unless otherwise duly authorized, shall be entitled to recover any charge, in any court of law, for any medical or surgical advice, or for attendance, or for the performance of any operation, or for any medicine which he shall have prescribed or supplied, nor be entitled to any of the rights or privileges conferred by this act, unless he shall prove that he is registered under this act, and has paid his annual contribution to the college.

§ 26. No certificate required by this or any other act now in force, from any physician or surgeon or medical practitioner, shall be valid, unless the person signing the same be registered under this act.

§ 27. Any registered member of the medical profession, who shall have been convicted of any felony in any court of law, shall thereby forfeit his right to registration, and, by the direction of the Provincial Medical Board, his name shall be erased from the register; or, in case a person known to have been convicted of felony shall present himself for registration, the registrar shall refuse such registration.

§ 28. Any person not entitled to be registered in this province, who shall be convicted, upon the oath of one or more witnesses, of having practiced medicine, surgery or midwifery in the Province of Quebec in contravention of the provisions of this act, after the passing of this act, for hire, for money, goods or effects generally, whatsoever, or in the hope of receiving any money, goods or effects, in the hope of reward (or who shall receive any reward whatsoever), shall, for practicing medicine, surgery or midwifery, incur a penalty of fifty dollars.

2. A like penalty of fifty dollars shall be incurred by any person assuming, after the passing of this act, the title of doctor, physician or surgeon, or any other name implying that he or she is legally authorized to practice medicine, surgery or midwifery in this province, if unable to establish the fact by legal proof, as required by the present act and the laws of the country.

3. Any person who, after the passing of this act, in an advertisement published in a newspaper, or in written or printed circulars, or on business cards, or on signs, assumes a



title, name or designation of such a nature as to lead the public to suppose or believe that he or she is duly registered or qualified as a practitioner of medicine, surgery or midwifery, or any of such branches of the medical profession, or any person who offers or gives his or her services as physician, surgeon or accoucheur, for hire, gain, or hope of reward, if he or she be not duly authorized or registered in this province, shall, in each such case, incur a like penalty of fifty dollars.

4. In every prosecution under this act, the proof of registration shall be incumbent upon the party prosecuted.

5. The penalties imposed by this act shall be recovered by an ordinary civil suit, in the name of the College of Physicians and Surgeons of the Province of Quebec, before any circuit court of the county or of the district in which the defendant is domiciled, or in which the offense is committed; and the court, if the proof is sufficient, may condemn the defendant to pay a penalty of fifty dollars, in addition to the costs, within a delay which it shall determine, and to an imprisonment of sixty days in the common gaol of the district, in default of his paying the amount of the judgment within such delay. The warrant of such imprisonment, in such cases, shall issue under the hand of the clerk of the said court, on a written application of the attorney *ad litem* of the prosecutor, and may, *mutatis mutandis*, be according to form (O 1), in the schedule to the Federal act, 32-33 Victoria, chapter 31, and shall be executed in the usual way: *Provided, always*, that he may, at any time, claim his discharge before the expiration of the said sixty days, on paying the penalty and costs to which he shall have been condemned.

6. The penalties imposed by this act shall be recoverable with costs, and the same may be sued for and recovered by the said College of Physicians and Surgeons of the Province of Quebec, by its corporate name; and, being recovered, shall belong to the said corporation for the use thereof. And neither in any such suit, nor in any other civil action to or in which the said corporation may be a party or interested, shall any member of the corporation be deemed incompetent as a witness by reason of his being such member.

§ 29. In all cases where proof of registration under this act is required, the production of a printed or other copy or extract from the register, certified under the hand of the registrar of the College of Physicians and Surgeons of the Province of Quebec, for the time being, shall be sufficient evidence that all persons therein named are registered practitioners, in lieu of the production of the original register; and any certificate upon such printed or other copy of the register, or extract from such register, purporting to be signed by any person, in his capacity of registrar of the college, under this act, shall be *prima facie* evidence that such person is such registrar, without any proof of his signature, or of his being in fact such registrar.

§ 30. The present board of governors, elected under the provisions of the acts heretofore repealed, shall be continued, and shall act until after the next triennial election, but subject in all other respects to the provisions of this act; and all by-laws, rules and regulations heretofore made by the said College of Physicians and Surgeons of the Province of Quebec, shall remain in force until repealed or modified under the provisions of this act.

§ 31. The officers appointed under the provisions of the acts repealed shall retain their respective offices, and perform their respective duties under the provisions of this act; and all books and registers heretofore kept by them in conformity with the acts hereby repealed, shall be continued in use for their respective purposes under this act.

§ 32. The College of Physicians and Surgeons of the Province of Quebec is hereby vested with all the rights, powers, privileges, property and assets heretofore belonging to the College of Physicians and Surgeons of Lower Canada, and of the College of Physicians and Surgeons erected under the act 40 Vict., chap. 26.

§ 33. No person licensed to practice as aforesaid, and enregistered under the said act 40 Vict., chap. 26, shall, by reason of anything contained in this act, be relieved or discharged from the fulfilment of all and every his requirements and obligations, fees, dues, fines and penalties, due and incurred under the said act, to and in favor of the heretofore college under the said late act, and specially in and by the 15th, 20th and 21st sections of the said act, all which shall be recoverable and enforceable against delinquents therefor, by the said college established by this act; and until the same shall have been complied with and settled with the said present college, such delinquents shall not be entitled to any of the rights and privileges conferred upon registered licentiates under this act.

§ 34. It shall be lawful for the president of the college, if he shall deem it expedient so to do, at any time, by an authority under his hand and seal, to authorize, name, constitute and appoint any person other than any of the officers of the said college, whoever he may select, to institute any proceedings against any person whom he may suppose to have infringed any of the provisions of this act, and to collect any and all sums of money payable to the said college by any person under this act.

§ 35. Nothing in this act contained shall be construed to affect the rights of any persons under the provisions of the act 28 Vict., chap. 59, and amended thereto, 29 Vict., chap. 95.

§ 36. This act will come into force on the day of the sanction thereof.

Assented to October 31, 1879; May 27, 1882.

MEDICAL DEPARTMENT OF M'GILL UNIVERSITY,

Montreal, Que. (Pop. 140 747.)

Organized in 1824 as the Montreal Medical Institution; became the Medical Department of McGill University in 1829. No class graduated during the Canadian Rebellion 1837-40.—Faculty embraces thirteen professors, four demonstrators and two instructors.



**COURSE OF INSTRUCTION:** One annual session of twenty-four weeks' duration, compulsory, and one summer course, optional, annually.—The complete course of study extends over four sessions of graded instruction with weekly quizzes.—At the end of the first year sessional examinations must be passed on anatomy, physiology, chemistry, materia medica, botany, practical anatomy.—At the end of the second year pass examinations on anatomy, practical anatomy, physiology, chemistry, practical chemistry, materia medica.—Third year, sessional examinations on medical jurisprudence with toxicology, hygiene, medicine, surgery, midwifery.—Fourth year, final pass examinations on medicine, surgery, midwifery, clinical medicine, clinical surgery, medical anatomy, surgical anatomy.

**REQUIREMENTS:** For admission, see section 8, Quebec Medical Act. For graduation, see section 15, Quebec Medical Act.

**FEES:** For first year, \$79; second, \$92; third, \$75; fourth, \$65; hospital, \$28; matriculation, \$5; graduation, \$30.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percen.
1877-78	161	27	16+
1878-79	166	37	22+
1879-80	166	30	18+
1880-81	168	38	22.7
1881-82	154	27	17.5
1882-83	188	30	16—

Average percentage of graduates to matriculates during the past six years, *eighteen*.

Number of graduates in Illinois, 20.

**REMARKS:** Stringent rules govern the students in this and other Canadian institutions. See remarks under Western University.

#### ECOLE DE MEDICINE ET DE CHIRURGIE.

(Affiliated with the University of Victoria.)

Montreal, Que.

Organized in 1843. Degrees were first conferred on its students in 1845. Degrees have been conferred each subsequent year.—The faculty embraces twelve professors, one lecturer and two demonstrators.

**COURSE OF INSTRUCTION:** One annual session of six months' duration; attendance upon which is compulsory. Students are not received after the first month. The complete course extends over three years of graded instruction with weekly quizzes. Lectures embrace chemistry, pharmacy, toxicology, materia medica, therapeutics, diseases of women and children, physiology, pathology, principles and practice of medicine and surgery, medical jurisprudence, botany, hygiene, histology and ophthalmology.

**REQUIREMENTS:** For admission, see section eight of the Quebec Medical Act. For graduation, see section fifteen of the Quebec Medical Act.

**FEES:** Matriculation, \$2; lectures, \$120; dissection, \$6; graduation, \$30.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentage of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percen.
1881-82	111	6	5.4
1882-83	—	33	—

Number of graduates (of Victoria University) in Illinois, 4.

#### ST. LAWRENCE SCHOOL OF MEDICINE.

Quebec, Que.

Organized in 1851. Extinct 1852.

#### MEDICAL DEPARTMENTS OF LAVAL UNIVERSITY.

Montreal and Quebec. (Pop. Quebec, 62 446.)

Organized in 1852. The department in Quebec is the successor of the Quebec School of Medicine which was organized in 1848, and existed four years. The Department in Montreal is known as a "Succursale," and was organized in 1878. The first class graduated in 1855 and a class has graduated each year since.—The faculty embraces twenty-six chairs, thirteen in each school.

**COURSE OF INSTRUCTION:** One annual session of about thirty-five weeks' duration; attendance is compulsory; the course is graded and extends over four years.—Lectures are divided into two sections, primary and final. Primary—descriptive anatomy 240 lectures, practical anatomy 180 lectures, of two hours each, microscopical anatomy and histology 120 lectures, physiology 150 lectures, general pathology 80 lectures, hygiene 60

lectures, chemistry 240 lectures, botany 60 lectures; examinations at the end of this course. Final section includes materia medica and general therapeutics 240 lectures, surgical pathology and theoretical surgery 240 lectures, medical pathology and special therapeutics 240 lectures, toxicology 240 lectures, medical jurisprudence 60 lectures, toxicology 60 lectures, diseases of the eye and ear 60 lectures, practical operative surgery 40 lectures, clinical surgery 180 lectures, clinical medicine 180 lectures, clinical studies of the diseases of the eye and ear 60 lectures, clinical midwifery not less than six cases, clinical study of diseases of women and children; examinations at the end of this course.

**REQUIREMENTS:** For admission, see section eight of the Quebec Medical Act. For graduation, see section fifteen of the Quebec Medical Act.

**FEES:** Annual fee, \$54; diploma, \$20.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	70	15	21.4
1878-79	65	9	13.8
1879-80	56	16	28.5
1880-81	97	13	13.5
1881-82	104	12	11.5
1882-83	117	26	22.4

Average percentage of graduates to matriculates during the past six years, *eighteen*.

Number of graduates in Illinois, 3.

#### BISHOP'S COLLEGE UNIVERSITY, FACULTY OF MEDICINE.

Montreal, Que.

Organized in 1870. The first class was graduated in 1871, and a class has been graduated each year since.—Faculty embraces thirteen professors, two lecturers, one demonstrator and curator.

**COURSE OF INSTRUCTION:** One regular course of twenty-four weeks' duration annually, and preliminary course of four weeks' duration. Course graded and extending over three and four years; longer course recommended but not required. Daily examinations and calling of the roll.—Lectures embrace, first session, botany, anatomy, physiology, chemistry, materia medica, medicine, gynecology, ophthalmology, otology, hygiene, practical chemistry, practical histology, dissections, hospital practice, clinical lectures. Third session, medicine, surgery, pathology, obstetrics, medical jurisprudence, hospital practice and clinical lectures.

**REQUIREMENTS:** For admission, see section 8, Quebec Medical Act. For graduation see section 15, Quebec Medical Act.

**FEES:** Matriculation, \$2; lectures, including clinical lectures, \$136; chemistry, \$12; anatomy, \$6; histology, \$16; hospital, \$12; graduation and registration, \$21.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	43	10	23+
1878-79	30	9	30
1879-80	28	6	21.4
1880-81	31	5	16+
1881-82	55	6	10.9
1882-83	34	3	8.8

Average percentage of graduates to matriculates during the past six years, *eighteen*.

**REMARKS:** R. A. KENNEDY, M.D., Registrar, writes: "During the past year, only 50 per cent. of our candidates [for admission] were successful at examination. It has been our aim to adopt the most modern views in imparting medical instruction."

#### COLORADO.

Population, 194,327. Number of physicians, 570. Number of inhabitants to each physician, 341.

AN ACT to Protect the Public Health and Regulate the Practice of Medicine in the State of Colorado.

Be it enacted by the General Assembly of the State of Colorado:

**SECTION 1.** That a board is hereby established which shall be known under the name and style of the State Board of Medical Examiners, to be composed of nine practicing

physicians of known ability and integrity, who are graduates of medical schools of undoubted respectability, giving each of the three schools of medicine (known as the regular, homoeopathic and eclectic schools) a representation as follows, to-wit: six physicians of the regular, two of the homoeopathic, and one of the eclectic school or system of medicine.

§ 2. The Governor of this State shall, as soon as practicable after this act shall have become a law, appoint a State Board of Medical Examiners, as provided in section one of this act, and the members first appointed shall be so designated by the Governor that the term of office of three shall expire in two years from the date of appointment, the term of office of three shall expire in four years from the date of appointment, and the term of office of three shall expire in six years from the date of appointment; thereafter, the Governor shall biennially appoint three members, possessing qualifications as specified in section one, to serve for the term of six years, and he shall also fill all vacancies that may occur, as soon as soon as practicable: *Provided*, that in making biennial appointments or filling vacancies, the representation of the medical schools in the board shall not be changed from the original basis, as in section one of this act.

§ 3. The board of medical examiners shall, as soon after their appointment as practicable, organize by the election of one of their members as president, one as secretary and one as treasurer, and adopt such rules as are necessary for their guidance in the performance of the duties assigned them, and also adopt a seal, which shall be affixed to all certificates issued by them to practitioners of medicine.

§ 4. That every person practicing medicine in any of its departments, shall possess the qualifications required by this act. If a graduate in medicine, he shall present his diploma to the State Board of Medical Examiners for verification, or furnish other evidence conclusive of his being a graduate of a legally chartered medical school in good standing; the State Board of Medical Examiners shall issue its certificate to that effect, signed by a majority of the members thereof, and such diploma or evidence shall be conclusive as to the right of the lawful holder of the same to practice medicine in this State. If not a graduate of a legally chartered medical institution in good standing, the person practicing, or wishing to practice medicine in this State, shall present himself before said board of medical examiners and submit himself to such examination as defined in section seven of this act, and if the examination be satisfactory to the examiners, the said board of medical examiners shall issue its certificate in accordance with the facts, and the lawful holder of such certificate shall be entitled to all the rights and privileges herein mentioned. All persons who have made the practice of medicine and surgery their profession or business continuously, for the period of ten (10) years, within this State, and can furnish satisfactory evidence thereof to the State Board of Medical Examiners, shall receive from said board a license to continue practice in the State of Colorado.

§ 5. The State Board of Medical Examiners, within ninety (90) days after the passage of this act, shall receive, through its president, applications for certificates and examinations. The president of said Board of Medical Examiners shall have the authority to administer oaths, and the said Board of Medical Examiners to take testimony in all matters relating to its duties. It shall issue certificates to all who furnish satisfactory proofs of having received diplomas from some legally chartered medical institution in good standing. It shall prepare two (2) forms of certificates, one for persons in possession of diplomas, the other for candidates examined by its members. It shall furnish to the county clerks of the several counties a list of all persons receiving certificates. Certificates shall be signed by a majority of the members of the Board of Medical Examiners granting them.

§ 6. There shall be paid to the treasurer of the State Board of Medical Examiners a fee of five dollars (\$5) for each certificate issued to graduates or practitioners of ten (10) years' standing and no further charges shall be made to the applicant; candidates for examination shall pay a fee of ten dollars (\$10) in advance.

§ 7. All examinations of persons, not graduates, shall be made directly by the State Board of Medical Examiners. Examinations may be in whole, or part, in writing, and the subjects of examination shall be as follows: Anatomy, physiology, chemistry, pathology, surgery, obstetrics and practice of medicine, (exclusive of materia medica and therapeutics.)

§ 8. Every person holding a certificate from the State Board of Medical Examiners shall have it recorded in the office of the clerk of the county in which he resides, and the record shall be endorsed thereon. Any person removing to another county to practice shall procure an endorsement to that effect on the certificate from the county clerk, and shall record the certificate in like manner in the county to which he removes, and the holder of the certificate shall pay to the county clerk a fee of one dollar (\$1) for making the record.

§ 9. The county clerk shall keep in a book provided for the purpose a complete list of the certificates recorded by him. If the certificate be based on a diploma, he shall record the name of the medical institution conferring it and the date when conferred. This register shall be open to public inspection in business hours.

§ 10. The State Board of Medical Examiners may refuse certificates to individuals who have been convicted of conduct of a criminal nature, and they may revoke certificates for like causes.

§ 11. Any person shall be regarded as practicing medicine within the meaning of this act who shall profess publicly to be a physician and prescriber for the sick, or shall attach to his name the title "M. D.," or "Surgeon," or "Doctor," in a medical sense. But nothing in this act shall be construed to prohibit gratuitous services in cases of emergency.

§ 12. Any person practicing medicine or surgery in any of their departments, in this state, without complying with the provisions of this act, shall be punished by a fine of

not less than fifty dollars (\$50), nor more than three hundred dollars (\$300), or by imprisonment in the county jail for not less than ten (10) nor more than thirty (30) days, or by fine and imprisonment, for each and every offense; and any person filing, or attempting to file, as his own, the diploma or certificate of another, or who shall give false or forged evidence of any kind, shall be guilty of a felony, and upon conviction shall be subject to such fine and imprisonment as are made and provided by the statutes of this State for the crime of forgery.

§ 13. All fees received by the treasurer of said board of examiners, and all fines collected by any officer of the law, under this act, shall be paid into the State treasury; and all necessary expenses of the board shall be paid for out of the funds of the State treasury not otherwise appropriated; but no fee shall be required or accepted by any member of the board for services.

§ 14. The State Board of Medical Examiners shall meet as a board of medical examiners in the city of Denver, on the first Tuesday of January, July and October of each year, and at such other times and places as may be found necessary for the performance of their duties.

§ 15. Justices of the peace and all courts of record in the State of Colorado shall have full jurisdiction over and power to enforce the provisions of this act.

Approved March 14, 1881.

#### MEDICAL DEPARTMENT OF THE UNIVERSITY OF DENVER.

Denver, Col. (Pop. 35 629.)

Organized in 1881. The first class graduated in 1882.—The faculty embraces thirteen professors, three lecturers and one demonstrator.

**COURSE OF INSTRUCTION:** Extends over two courses of twenty-four weeks each; graded course recommended, but not required.—Lectures embrace principles and practice of surgery, clinical surgery, surgical pathology, principles and practice of medicine, clinical medicine, diseases of women, obstetrics, diseases of chest and climatology, physiology, anatomy, materia medica, therapeutics, chemistry, diseases of the mind and nervous system, medical jurisprudence, ophthalmology, practical chemistry, microscopy, pathological anatomy, laryngology and rhinosecopy.

**REQUIREMENTS:** For admission, (a) high school or college diploma, or (b) certificate of proficiency from a reputable teacher, or (c) matriculation examination in English composition, writing, grammar, arithmetic, natural philosophy, rudiments of Latin.—For graduation, (1) twenty-one years of age; (2) good moral character; (3) three years' study; (4) two full courses of lectures; (5) practical anatomy and chemistry for two sessions; (6) thesis; (7) satisfactory examination on seven different branches.

**FEES:** Annual, \$85; graduation, \$30.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1881-82	15	5	33 +
1882-83	21	5	23.8

Average percent. of graduates to matriculates, during the past two years, *twenty-eight*.

**REMARKS:** Course tickets are now endorsed on the back, certifying that the lectures of the professors signing have been actually attended.

#### MEDICAL DEPARTMENT OF THE UNIVERSITY OF COLORADO.

Boulder, Col. (Pop. 3069.)

Organized in 1883.—The faculty embraces two professors, an instructor and a demonstrator.

**COURSE OF INSTRUCTION:** One annual graduating course of thirty-four weeks' duration. The course is graded and extends over four years. During the session of '83-84 only the studies of the first year's course will be taught, viz: Anatomy, physiology, chemistry and botany.

**REQUIREMENTS:** For admission, (1) diploma from recognized college, high school or scientific school, or (2) satisfactory written examination in English, Latin and physics, and either German, French, algebra, geometry or botany.

**FEES:** Matriculation, \$5 for residents, \$10 for non-residents.



## CONNECTICUT.

Population 537 454. Number of physicians, 952. Number of inhabitants to each physician, 575.

### AN ACT to Prevent Irregular Medical Practice.

**SECTION 1.** Any itinerant person, not an inhabitant of this State, who shall, by circular, handbill or any other mode of advertisement, profess to treat, and shall, in any town in this State, treat disease or injury by any drug, nostrum, manipulation or other expedient, shall be fined twenty-five dollars for each day that he shall exercise his profession without procuring a license therefor.

§ 2. Selectmen in towns and the chief officer of police in cities, may issue such licenses upon payment to the town or city treasurer by such itinerant person of the sum of twenty dollars for each day for which his license may be granted. The license shall distinctly state the number of days for which it shall be in force, and may be renewed at its expiration for any further time, upon the same terms. Such selectmen and chief officer of police shall record such licenses in books kept by them for that purpose, which shall be open to public inspection.

§ 3. This act shall not apply to commissioned surgeons in the army or navy of the United States, to any persons rendering gratuitous services in cases of emergency, nor to any physician or surgeon coming into this State from another State to consult in any particular case.

§ 4. Prosecutions for violations of this act may be heard and determined by police courts, where established, and by justices of the peace in towns in which such courts have no criminal jurisdiction.

Approved April 12, 1881.

### MEDICAL DEPARTMENT OF YALE COLLEGE,

New Haven, Conn. (Pop. 50 840.)

Organized in 1810, as the Medical Institution of Yale College. In 1879 a new charter changed the title to the present reading.—The faculty embraces eight professors and eight lecturers.

THE SYSTEM OF INSTRUCTION is arranged in a graded course extending over three years, thirty-four weeks in each year.—Lectures embraced in the first course: general and medical chemistry, qualitative analysis and toxicology, anatomy, dissections, histology, materia medica, and therapeutics. Second year: Anatomy, dissection, physiology, pathology, materia medica, therapeutics, theory and practice of medicine, clinical medicine, obstetrics, surgery, clinical surgery. Third year: Pathology, theory and practice of medicine, physical diagnosis, clinical medicine, clinical surgery, obstetrics, diseases of children, diseases of women, ophthalmology, medical jurisprudence, insanity, diseases of the throat, dietetics and toxicology. Students who have studied elsewhere, either in any recognized medical school or under private preceptor of good standing, may enter an advanced class, upon passing the examinations required of equal grade.

**REQUIREMENTS:** For admission, (a) a degree in letters or science; or, (b) passage of examination for admission to some college; or, (c) examination in (1) mathematics, including algebra, geometry, and metric system of weights and measures; (2) Latin; (3) physics. Students not fully prepared will be admitted on condition that the deficiency be made up within a reasonable time.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) pass the required examinations in all the studies of the three years' course satisfactory to the Board of Examiners.

**FEES:** Matriculation (paid once only), \$5; tuition, annual, \$200; for third year, \$100; graduation, \$30.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	58	10	17 +
1878-79	60	16	26.6
1879-80	32	12	37.5
1880-81	26	10	42 +
1881-82	21	2	9.5
1882-83	32	7	21.9

Average percent. of graduates to matriculates during the past six years, *twenty-five*.

Number of graduates in Illinois, 6.

Prof. C. A. LINDSLEY, M. D., Dean, writes: "The falling off of matriculates during the last three years is due to the fact that an examination for admission was required which excluded a large proportion of such as used to be admitted. The term of study was also increased, and this made the expenses somewhat greater. Ten students applied for the degree at the last graduation examination, and three of the number were rejected.

The Board of Examiners consists of the faculty and an equal number of the members of the Connecticut State Medical Society.

**DAKOTA.**

Population, 135 177. Number of physicians, 212. Number of inhabitants to each physician, 642.

A law designed to regulate the practice of medicine and surgery passed the Territorial Legislature at the session of 1882, but was vetoed by the Governor. A similar law was introduced at the last (1883) session, and was referred to a committee, the chairman of which was a member of the medical profession, but who refused to bring the measure before the legislative body.

**DELAWARE.**

Population, 146 608. Number of physicians, 217. Number of inhabitants to each physician, 675.

**AN ACT to Regulate the Practice of Medicine in the State of Delaware.**

Be it enacted by the Senate and House of Representatives of the State of Delaware in General Assembly met :

SECTION 1. That it shall not be lawful for any person to practice medicine or surgery in this State who has not graduated with the degree of Doctor of Medicine and received a diploma from some medical college authorized to grant diplomas: *Provided*, that the provisions of this section shall not apply to persons who have been eight years in continuous practice in this State or who are now, or may hereafter be authorized by the Board of Medical Examiners of this State, as prescribed in Chap. 37, Sec. 3 of the Revised Code of the State of Delaware. (The Medical Board of Examiners shall be composed of as many fellows as the Society shall deem proper. The said Society shall appoint its own president and secretary and shall have power to grant licenses under their signatures for the practice of medicine and surgery in this State and they are hereby required to grant such licenses to any person applying therefor who shall produce a diploma from a respectable medical college, or shall upon full and impartial examination be found qualified for such practice.)

§ 2. That any person who shall practice or attempt to practice medicine or surgery, or shall prescribe for any sick person or persons or perform any surgical operation for fee or reward, in violation of Sec. 1 of this act, shall be deemed guilty of a misdemeanor and upon conviction thereof in any court of competent jurisdiction shall be fined in a sum of not less than one hundred dollars nor more than five hundred dollars for each and every offense, at the discretion of the court, one half of said fine to be for the use of the informer, and the other half for the use of The State Board of Health.

§ 3. Any person who shall attempt to practice medicine or surgery by opening a transient office within this State, or who shall by hand bills or other form of written or printed matter or advertisement assign such transient office or place to meet persons seeking medical or surgical advice or prescription, shall, before being allowed to practice as aforesaid, appear, before the clerk of the peace of any of the counties of this State and furnish to him satisfactory evidence that the provisions of Sec. 1 of this act have been complied with; the said clerk of the peace shall thereupon issue to the person so applying a license to practice medicine and surgery in any of the counties of this State, provided, that the person so applying shall pay or cause to be paid to the said clerk of the peace as a license fee the sum of two hundred dollars per annum for said privilege.

§ 4. The provisions of this act shall not apply to physicians who are regular practitioners of any other State, coming into this State, in consultation.

§ 5. That within ninety days after the passage of this act every physician engaged in the practice of medicine or surgery in this State, shall register with the clerk of the peace of the county in which he resides, his name, date of graduation, and the college from which he was graduated; and make oath or affirmation that the diploma or certificate of his qualification to practice, which he is hereby required to exhibit to the clerk of the peace, is a bona fide diploma or certificate, and conferred upon him by the institution named therein; or that he has been a practitioner of medicine and surgery for eight years or more. Any person hereafter engaging in the practice of medicine or surgery in this State shall be required to register as above. Any one failing to comply with the provisions of this section shall forfeit the sum of ten dollars, to be collected by the clerk of the peace before any justice of the county, in the name of the State of Delaware, and all sums collected shall be appropriated as follows: One-half to the clerk of the peace, and one-half to be paid by him to the county treasurer for county purposes.

§ 6. That all acts or parts of acts inconsistent herewith, are hereby repealed.

Passed April 19, 1883.

## DISTRICT OF COLUMBIA.

Population, 177 624. Number of physicians, 423. Number of inhabitants to each physician, 419.

AN ACT to Revise, with Amendments, an Act to Incorporate the Medical Society of the District of Columbia.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled :

SECTION 1. That Frederick May, M. D., Alexander McWilliams, M. D., and twenty others, and such other persons as they may from time to time elect, and their successors, are hereby declared to be a community, corporation and body politic, forever, or until Congress shall by law direct this charter to cease and determine, by and under the name and title of the Medical Society of the District of Columbia; and by and under the same name and title they shall be able and capable in law to purchase, take, have, and enjoy, to them and their successors, in fee or for lease, estate or estates, any land, tenements, rents, annuities, chattels, bank stock, registered debts, or other public securities within the District, by the gift, bargain, sale, or demise, of any person or persons, bodies politic or corporate, capable to make the same, and the same, at their pleasure to alien, sell, transfer, or lease and apply, to such purposes as they may adjudge most conducive to the promoting and disseminating medical and surgical knowledge, and for no other purpose whatever: *Provided, nevertheless*, that the said society or body politic shall not, at any one time, hold or possess property, real, personal, or mixed, exceeding in total value the sum of six thousand dollars per annum.

§ 2. That the members of the said society above designated, shall hold, in the city of Washington, two stated meetings in every year, viz: on the first Mondays in January and July; the officers of the society to consist of a president, two vice-presidents, one corresponding secretary, one recording secretary, one treasurer, and one librarian, who shall be appointed on the first Monday in July, one thousand eight hundred and thirty-eight and on the annual meeting in January forever thereafter, and who shall hold their offices for one year, and until others are chosen in their stead, (not less than seven members being present at such meeting); and the society may make a common seal and may elect into their body such medical and chirogurgical practitioners, within the District of Columbia, as they may deem qualified to become members of the Society, it being understood that the officers of the society now elected are to remain in office until the next election after the passage of this act.

§ 3. That it shall and may be lawful for the said medical society, or any members of them attending, (not less than seven) to elect by ballot five persons residents of the District of Columbia, whose duty it shall be to grant licenses to such medical and chirogurgical gentlemen as they may, upon a full examination, judge qualified to practice the medical and chirogurgical arts, or as may produce a diploma from some respectable medical college or society, each person so obtaining a certificate to pay a sum, not exceeding ten dollars, to be fixed on or ascertained by the society.

§ 4. That any three of the examiners shall constitute a board for examining such candidates as may apply, and shall subscribe their names to each certificate by them granted, which certificate shall also be countersigned by the president of the society, and have the seal of the society affixed thereto by the secretary, upon paying into the hands of the treasurer the sum of money to be ascertained as above by the society; and any one of the said examiners may grant a license to practice until a board in conformity to this act can be held: *Provided*, that nothing herein contained shall authorize the said corporation in anywise to regulate the practice of medical or chirogurgical attendance on such persons as may need those services, nor to establish or fix a tariff of charges or fees for medical attendance or advice.

§ 5. That after the appointment of the aforesaid medical board, no person not heretofore a practitioner of medicine or surgery within the District of Columbia, shall be allowed to practice within the said District, in either of said branches, without first having obtained a license, testified as by this law directed, or the production of a diploma from a respectable medical college or a board of examiners established by law: *Provided*, that the professors in such college, or the examiners in such board, be men regularly instructed in medicine and surgery, and the collateral branches of medical education, anatomy, chemistry, under the penalty of fifty dollars for each offense, to be recovered in the county court, where he may reside, by bill of presentment and indictment, one-half for the use of the society, and the other for that of the informer.

§ 6. That every person who, upon application, shall be elected a member of the medical society, shall pay a sum not exceeding ten dollars, to be ascertained by the society.

§ 7. That the medical society be, and they are hereby, empowered from time to time to make such by-laws, rules and regulations as they may find requisite, which by-laws, rules and regulations shall, in their application and operation, be exclusively confined to said society, as a society or body corporate, and not to its members individually, when not acting in a corporate character; to break or alter their common seal; to fix the times and places for the meetings of the boards of examiners; filling up vacancies in the medical board; and to do and perform such other things as may be requisite for carrying this act into execution, and which may not be repugnant to the Constitution and laws of the United States: *Provided, always*, that it shall and may be lawful for any person, resident as aforesaid, and not prohibited as aforesaid, when specially sent for, to come into any part of this district, and administer or prescribe medicine, or perform any operation for the relief of such, to whose assistance he may be sent for: *And provided also*, that nothing in this act contained shall be so construed as to prevent any person, living within or without said District, from administering medicine or performing any surgical operation, with the consent of the person or the attendants of



the person to whom such medicine is administered, or upon whom such surgical operation is performed, without fee or reward; nor to prevent the giving advice or assistance in any way to the sick or afflicted, upon charity and kindness; nor to prevent the receipt of reward for the same, if voluntarily tendered or made; nor to extend to midwifery by females; and any person so administering medicine or performing any surgical operation, not authorized to practice physic and surgery according to the provisions of this act, shall be prohibited from collecting any fee or reward for the same by any process at law: And be it further provided, That no person shall be admitted to an examination until he shall produce satisfactory evidence that he has studied physic and surgery three years, including one full course of medical lectures, as usually taught at medical schools, or four years without such a course of lectures.

§ 8. That Congress may at any time alter, amend or annul this act of incorporation of said society at pleasure.

Approved July 7, 1833.

Dr. JOHN S. BILLINGS, Surgeon, U. S. A., writes: "There are a certain number of quacks, abortionists, etc., in the District, but as their prosecution would be troublesome, and it appears to be nobody's business in particular to initiate proceedings, nothing is done."

Dr. G. L. MAGRUDER, treasurer of the society, writes: "The only law that exists in this District in regard to the practice of medicine and surgery, is contained in the act incorporating the medical society. It seems to have been inefficient, from the fact that no one has been especially designated to enforce it. I can not learn of any trial ever having taken place."

"About three years since, an unsuccessful attempt was made to get a bill passed by Congress to regulate the practice of medicine, and there has been no renewal of the effort. About two hundred of the four hundred and nineteen physicians in the District are members of the medical association."

#### NATIONAL MEDICAL COLLEGE, MEDICAL DEPARTMENT COLUMBIAN UNIVERSITY.

Washington, D. C. (Pop. 147 293.)

Organized in 1821 as to the Medical Department of Columbian College. It was also authorized to use the title of National Medical College. In 1873 Columbian College became Columbian University. The first class was graduated in 1822. Operations were suspended from 1834 to 1838, and from 1861 to 1863. With these exceptions, classes have been graduated each year since its founding.—The faculty embraces seven professors and four demonstrators.

COURSE OF INSTRUCTION: One graduating course of twenty weeks' duration, and one spring course of eight half weeks' duration annually.—Lectures embrace anatomy, physiology, histology, pathology, materia medica, therapeutics, chemistry, surgery, obstetrics and theory and practice of medicine, with ample opportunity for bed-side instruction.

REQUIREMENTS: For admission, none.—For graduation: (1) "candidates must have attended three courses of lectures" and have passed examinations at the end of the second and third years: (2) three years' study; (3) good moral character; (4) twenty-one years of age; (5) dissected at least two sessions; (6) have attended two courses of clinical instruction. Examinations are both oral and written.

FEES: Matriculation (paid once only), \$5; lectures, \$100; demonstrator, \$10. Graduation, \$30, *i. e.*, examinations, primary, \$20, final, \$10.

STUDENTS: Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	53	6	11.3
1878-79	55	11	20.
1879-80	56	8	14.3
1880-81	44	5	11.3
1881-82	52	8	15.4
1882-83	79	10	12.6

Average percent. of graduates to matriculates during the past six years, *fourteen*.

Number of Illinois students during the past year, 6.

Number of graduates in Illinois, 8.

REMARKS: DR. A. F. A. KING, Dean, writes: "The faculty have recently adopted a resolution requiring a preliminary examination before matriculation, but the details could not be arranged to go into operation soon enough for our annual announcement."

#### MEDICAL DEPARTMENT OF THE UNIVERSITY OF GEORGETOWN.

Washington, D. C.

Organized in 1850. The first class was graduated in 1851. Classes have been graduated each subsequent year since.—The faculty embraces six professors, two clinical professors and two lecturers.



**COURSE OF INSTRUCTION:** One annual course of thirty weeks' duration, graded course extending over three years.—Lectures embrace, first year, anatomy, physiology, materia medica and chemistry; second year, anatomy, physiology, materia medica, chemistry, pathology and diagnosis—medical, surgical and obstetrical—ophthalmology, laryngology, otology, diseases of children, hygiene and medical jurisprudence; third year, same as second. Examination at the close of each year. Daily quizzes by the faculty. Hospital and dispensary clinics.

**REQUIREMENTS:** For admission, none.—For graduation: (1) good moral character; (2) twenty-one years of age; (3) not less than three years' study; (4) three full courses of instruction; (5) two courses of practical anatomy; (6) two courses of clinical instruction; (7) pass all examinations with required (65) percentage.

**FEES:** Matriculation, (paid but once,) \$5; full course of lectures, \$100; demonstrator, \$10.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	40	4	10.
1878-79	38	6	16 —
1879-80	54	13	24 +
1880-81	43	5	11.6
1881-82	30	7	23.3
1882-83	27	4	15—

Average percentage of graduates to matriculates during the past six years, *seventeen*.

Number of graduates in Illinois, 15.

**REMARKS:** Attendance on recitations is obligatory; a record is kept and each student credited at the end of each course.

#### MEDICAL DEPARTMENT OF HOWARD UNIVERSITY.

Washington, D. C.

Organized in 1867. The first class graduated in 1871, and classes have graduated each subsequent year.—The faculty embraces nine professors and two demonstrators.

**COURSE OF INSTRUCTION:** One annual graduating course of twenty weeks' duration.—The course is graded, extending over three sessions in different years.—Lectures embrace anatomy, physiology, chemistry, materia medica, therapeutics, obstetrics, hygiene, practice of medicine, surgery, diseases of women and children and medical jurisprudence. The instruction comprises lectures, recitations, clinics and practical exercises.

**REQUIREMENTS:** For matriculation, (a) good moral character; (b) sufficient knowledge of Latin language to read and write prescriptions and understand medical terms; (c) pass an examination in ordinary English branches.—For graduation: (1) twenty-one years of age; (2) three years' study, including three courses of lectures; (3) attended clinical lectures and dissections; (4) written and oral examination on required branches; (5) thesis on original observation.

**FEES:** Matriculation, \$10; demonstrator, \$5; incidental expenses, \$15; graduating, \$30.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	26	9	34 +
1878-79	30	10	33 +
1879-80	31	13	42—
1880-81	81	13	16 +
1881-82	91	16	17 +
1882-83	87	31	35 +

Average percent. of graduates to matriculates during the past six years, *twenty-seven*.

Number of graduates in Illinois, 1.

**REMARKS:** "This college is free to all, without regard to sex or race, who are desirous of pursuing the study of medicine and are qualified therefor by good moral character, proper age and suitable education."

**FLORIDA.**

Population, 269 493. Number of physicians, 374. Number of inhabitants to each physician, 720.

**AN ACT to Regulate the Practice of Medicine in the State of Florida.**

The People of the State of Florida, represented in Senate and Assembly, do enact as follows :

SECTION 1. There shall be appointed by the Governor of this State six boards of medical examiners, consisting of not less than three nor more than five practitioners of medicine, of acknowledged skill and experience, and of five years' practice in this State, said boards to be located respectively at Tallahassee, Jacksonville, Pensacola, Key West, Ocala and Tampa, whose duty it shall be to carefully examine any and all persons not graduates of medicine, who have not heretofore practiced medicine in this State, who may hereafter propose to practice medicine, surgery or obstetrics in this State, and, if found competent to practice the same, said boards shall issue a certificate to that purport to such person, which certificate shall be recorded in the office of the clerk of the circuit court of each county where the person receiving it may practice.

§ 2. The examination by the boards thus appointed shall include the branches of anatomy, operative and minor surgery, obstetrics, diseases of women and children, and the general laws of health.

§ 3. The said board of medical examiners shall be allowed to charge and receive the sum of five dollars for each person so examined, to be paid upon receipt of certificate of competency by the party examined.

§ 4. That from and after the passage and approval of this act, any person who shall commence the practice of medicine, surgery or obstetrics in this State without having first obtained such certificate and recorded the same, as provided for in section 1 of this act, shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be punished by fine not exceeding two hundred dollars nor less than fifty dollars, or imprisoned in the county jail not exceeding six months, or by both such fine and imprisonment, at the discretion of the court; provided, that the provisions of this act shall not be construed as applying to physicians or surgeons temporarily in the State when sent for to perform surgical operations or for consultation, or to women commonly known and designated as "midwives;" provided further, that this act shall not apply to physicians now in this State.

§ 5. Said board may adopt such rules and regulations as to examinations and certificates as they may deem proper, not inconsistent with the constitution and laws of this State.

§ 6. All laws in conflict with the provisions of this act be and the same are hereby repealed.

Approved March 7, 1881.

The 4th subsection of section 11, General Revenue Laws, provides that lawyers, doctors, dentists, druggists and photographers shall pay for license tax, ten dollars (\$10) annually.

**MEDICAL DEPARTMENT OF FLORIDA UNIVERSITY.***Tallahassee College of Medicine and Surgery.*

Tallahassee, Fla. (Pop., 2494.)

Organized in 1853. The faculty embraces six professors.

**COURSE OF INSTRUCTION :** One term of sixteen weeks' duration annually. Lectures embrace anatomy, surgery, institutes and theory and practice of medicine, orthopedic surgery and medical jurisprudence. The college possesses a "human skeleton and dissected preparations, such as will make the labors of the dissecting-room less disagreeable."

**REQUIREMENTS :** For admission, none.—For graduation, "Any suitable person of any school of medicine that can stand a thorough examination by the faculty, and who receives the vote of the regents of the University, will receive a diploma."

**FEES :** "Price of the tickets for all the chairs," \$60. "Examination for graduation and degrees," \$25. "Diploma, no charge."

**REMARKS:** The "dean" of this institution is the "Rev. ———, A.M., M.D., LL.D.," of Adrian, Mich., Atlanta, Ga., and Tallahassee, Fla.,—of whom it is remarked, in the official announcement of the college, that "The members [of the faculty] all defer complacently to the views and expositions of their dean, who is an elderly and experienced physician and author in medicine, of extensive works on various branches, whose primary medical education was allopathic, but who has, for years, been entirely devoted to a reform in the healing art, and a reconstruction of the theories of the science of medicine." In Adrian, the "dean" is a school teacher. In Atlanta, he is advertised to occupy the chairs of general and special pathology and of medical jurisprudence in the Georgia Eclectic Medical College. In Tallahassee, he is "Professor Institutes of Medicine and Lecturer Clinics."

Extracts from the circular of the Tallahassee College :

"The requirements for graduation are the equivalent of those of the highest order of medical colleges in our country. But, as is known to every one of good judgment and experience, no time rule or routine order can be a proper basis for graduation. \* \* \*

"Intellectual power and good sense are prime factors of professional competency—these, with proper instruction, without reference to time or form, can alone suffice."

"Candidates for graduation or degrees must also be responsible for themselves."

"Persons graduating from this college will be competent to practice medicine on any of the popular systems."

## GEORGIA.

Population, 1 542 180. Number of physicians, 1905. Number of inhabitants to each physician, 770.

### AN ACT to Regulate the Practice of Medicine in the State of Georgia.

SECTION 1. The General Assembly of Georgia do enact, That no person shall practice medicine within this State unless he has been legally authorized so to do, or shall hereafter be authorized so to do, by a diploma from an incorporated medical college, medical school or university, and by compliance with subsequent sections of this act.

§ 2. Be it further enacted, That, for the purposes of this act, the words "practice medicine" shall mean to suggest, recommend, prescribe or direct, for the use of any person, any drug, medicine, appliance, apparatus or other agency, whether material or not material for the cure, relief or palliation of any ailment or disease of the mind or body, or for the cure or relief of any wound, fracture or bodily injury or other deformity, after having received or with the intent of receiving therefor, either directly or indirectly, any bonus, gift or compensation.

§ 3. \* \* \* \* That every person now lawfully engaged in the practice of medicine within this State, shall, on or before the first day of December, eighteen hundred and eighty-one, and every person hereafter duly qualified to practice medicine, shall, before commencing to practice, register in the office of the clerk of the Superior Court of the county wherein he resides and is practicing, or intends to commence the practice of medicine, in a book to be kept for the purpose by said clerk, his name, residence and place of birth, together with his authority for practicing medicine, as prescribed in this act. The person so registering shall subscribe or verify, by oath or affirmation, before a person duly qualified to administer oaths under the laws of this State, an affidavit containing such facts, and whether such authority is by diploma or license, and the date of the same, and by whom granted, which shall be exhibited to the county clerk before the applicant shall be allowed to register, and which, if wilfully false, shall subject the affiant to conviction and punishment for false swearing. The county clerk to receive a fee of fifty cents for each registration, to be paid by the person so registering.

§ 4. \* \* \* \* That any registered physician in this State, who may change his residence from one county into another county in this State, shall register within the clerk's office of the county to which he removes, and wherein he intends to reside and to practice medicine, as provided in section three of this act.

§ 5. \* \* \* \* That any person who violates either of the four preceding sections of this act, or who shall practice or offer to practice medicine without lawful authority, or under cover of a diploma or license illegally obtained, shall be deemed guilty of a misdemeanor, and, on conviction, shall be punished by a fine of not less than one hundred dollars nor more than five hundred dollars, or by imprisonment for not less than thirty nor more than ninety days, or both. The fine, when collected, shall be paid the one-half to the person, persons or corporation making the complaint, the other half into the county treasury.

§ 6. \* \* \* \* That nothing in this act shall apply to commissioned medical officers of the United States army or navy, or to the United States marine-hospital service, or to legally qualified dentists in the practice of their profession, or to any woman practicing only midwifery.

§ 7. \* \* \* \* That all provisions of laws providing for the organization, qualification and duties of any and all boards of physicians, of any school whatever, be, and the same are hereby, repealed, and there shall henceforth exist in this State no board of physicians, but the only requisite qualifications of practitioners of medicine shall be those hereinbefore set forth.

§ 8. \* \* \* \* That all laws or parts of laws in conflict with this act be, and the same are hereby, repealed.

Approved September 28, 1881.

### AN ACT to Regulate the Granting of Medical Diplomas.

SECTION 1. Be it enacted, etc., That from and after the passage of this act it shall be unlawful for the faculty or officers of any medical college in the State of Georgia to grant or issue a diploma to any student of medicine, or other person, unless said student or other person shall have attended two or more full courses of study in some regularly

chartered medical college in good standing, and shall have submitted to and passed a creditable examination by the faculty or professors of said college upon all the branches usually taught in medical colleges.

§ 2. \* \* \* \* That if the faculty or officers of any medical college in this State shall violate any of the provisions of the preceding section of this act, he or they shall be subject to a fine of five thousand dollars, said fine to be collected out of the property of any or all of said faculty or officers of said college. The fine, when collected, shall be paid the one-half to the person, persons or corporation giving the information, the other half into the county treasury, to be used for educational purposes only.

§ 3. \* \* \* \* That all laws and parts of laws in conflict with this act be, and the same are hereby, repealed.

Approved September 27, 1881.

#### MEDICAL COLLEGE OF GEORGIA.

(Medical Department, University of Georgia.)

Augusta, Ga.

Organized in 1832. Graduates in Illinois, 5.—See *ADDENDA*.

#### SOUTHERN BOTANICO-MEDICAL COLLEGE.

Forsyth and Macon, Ga.

Organized in 1839, at Forsyth. Removed to Macon in 1846. Name changed to the Reform Medical College of Georgia, in 1854. The first class was graduated in 1841, and classes were graduated every year until 1861. There was no graduating class from 1861 to 1867, inclusive. A class was graduated in 1868, and in each subsequent year until 1874, when the name was again changed to the College of American Medicine and Surgery, and the school was again removed to Atlanta, where it now exists—*vide infra*.

#### THOMPSONIAN COLLEGE.

Barbourville, Ga.

Organized about 1850. Extinct.

#### SAVANNAH MEDICAL COLLEGE.

Savannah, Ga.

Organized 1853.—Closed during the rebellion of 1861-66. Extinct since 1880.

#### ATLANTA MEDICAL COLLEGE.

Atlanta, Ga. (Pop. 37 409.)

Organized in 1854.—Closed during the rebellion, 1861-65. Reorganized in 1865. Classes were graduated from 1855 to 1861, inclusive, and each subsequent year.—The faculty embraces eight professors, one assistant, two lecturers and one demonstrator.

**COURSE OF INSTRUCTION:** One annual course of eighteen weeks.—Lectures embrace anatomy, physiology, chemistry, materia medica, practice, general pathology, obstetrics and diseases of women and children, diseases of the eye and ear, and surgery. Instruction is also given on venereal diseases, diseases of the throat and minor surgery. Medical clinics are held, and "quizzes are given from time to time by the professors to those who desire to enter their names on the lists."

**REQUIREMENTS:** For admission, none.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) three years' study; (4) two full courses of lectures; (5) thesis, or a report of any of the clinics; (6) satisfactory examination on subjects mentioned above.

**FEES:** Matriculation, \$5; demonstrator, \$10; full course, \$75; graduation, \$30. In compliance with a law, making a donation to the building and apparatus of the college, tickets for the full course are given gratis to one student from each congressional district in the State.

**STUDENTS:** Number of matriculates and graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	88	23	26+
1878-79	125	34	27+
1879-80	101	43	42+
1880-81	93	31	33+
1881-82	135	56	41+
1882-83	126	39	31—

Average percent. of graduates to matriculates during the past six years, *thirty-four*.



## OGLETHORPE MEDICAL COLLEGE.

Savannah, Ga.

Organized in 1855, and continued its sessions until the commencement of the war, 1861. Extinct.

## REFORM MEDICAL COLLEGE.

Macon, Ga.

Organized in 1854. See remarks under Southern Botanic-Medical College, above. Name changed in 1874 to the College of American Medicine and Surgery—*vide infra*.

## COLLEGE OF AMERICAN MEDICINE AND SURGERY.

Atlanta, Ga.

Organized in 1874 as the successor of the Reform Medical College at Macon. Removed to Atlanta in 1881—*vide supra*. The first class under this name was graduated in 1874. There was no graduating class in 1877, '78, '79, '80 or '81.—The faculty embraces six professors and an assistant demonstrator.

**COURSE OF INSTRUCTION:** Two courses of lectures of sixteen weeks' duration annually. Lectures embrace the principles and practice of medicine and surgery, anatomy, physiology, histology, microscopy, materia medica, therapeutics, pathology, chemistry, toxicology, pharmacy, obstetrics and diseases of women and children.

**REQUIREMENTS:** For admission, (a) seventeen years of age; (b) good common school education; (c) good moral character. "No intemperate student will be admitted on any terms." For graduation: (1) three years' study; (2) two courses of lectures; (3) thesis or clinical report; (4) "must have attended clinics and dissected."

**FEES:** Matriculation, \$5; full course, \$50; demonstrator, \$10; graduation, \$25.

"This college will educate one student from each congressional district in Georgia free of charge."

**STUDENTS:** Session of 1882-83—matriculates, 24; graduates, 14. Percentage of graduates to matriculates, *fifty-eight*.

**REMARKS:** S. F. SALTER, M. D., Dean of the faculty, writes that he "cannot vouch for any of the graduates previous to 1882-83, the earlier records having been destroyed by fire, and the late records stolen."

The Eclectic Star, the organ of this institution, makes the following announcement: "The janitor will meet all day trains from the first of October, and will have a badge on his hat. He will bring you direct to the college and attend to your baggage; will furnish free ride to those who matriculate at this college. Do not be misled. Come, and do not listen to a single drummer until you visit us."

## GEORGIA ECLECTIC MEDICAL COLLEGE.

Atlanta, Ga.

Organized in 1877. The first class graduated in 1877 and classes have graduated each subsequent year. The faculty embraces eight professors and one demonstrator.

**COURSE OF INSTRUCTION:** One course of lectures of twenty weeks' duration annually. Lectures embrace physiology, anatomy, chemistry, toxicology, surgery, materia medica, theory and practice of medicine, pathology, medical jurisprudence, nervous and venereal diseases, obstetrics, diseases of women and children, dental practice and surgery. Daily quizzes are held by the faculty. Each member of the graduating class is required to present, once a week, a thesis on some subject already covered by the lectures, and defend the same.

**REQUIREMENTS:** For admission, none.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) two full courses of lectures; (4) thesis; (5) must have dissected the best part of the term; (6) "must have been diligent in attending the lectures and clinics;" (7) "thorough examination on the respective branches taught in the college."

**FEES:** Lectures, \$60; demonstrator, \$5; graduation, \$25. "The faculty have always admitted several beneficiaries."

**STUDENTS:** Only the matriculates (81,) and graduates (24,) for the session of 1881-82, have been reported. Percentage of graduates to matriculates, session of 1881-82, *thirty*.

**REMARKS:** The incumbent of the chairs of general and special pathology and of medical jurisprudence in this college, is also "dean" of the "Medical Department of the Florida University," at Tallahassee—which see ante, p. 48.

## SOUTHERN MEDICAL COLLEGE.

Atlanta, Ga.

Organized 1879. Faculty embraces nine professors and two lecturers.

**COURSE OF INSTRUCTION:** One annual course of nineteen weeks' duration.—Lectures embrace principles and practice of medicine, obstetrics, diseases of women and children, physiology, hygiene, surgery, anatomy, materia medica, therapeutics, toxicology, diseases of the eye, ear and throat, chemistry, venereal diseases, dermatology, and dental surgery. Hospital and dispensary clinics are given, and quizzes by the professors to such students as desire them. A graded course of three years recommended, but not required.

**REQUIREMENTS:** For admission, none.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) two full courses of lectures; (4) "must have attended the dissections;" (5) "must undergo a personal and satisfactory examination before the faculty—examination must occur at close of session, except in cases of pressing necessity, and then only by unanimous consent of the faculty;" (6) thesis, or report of clinic.

**FEES:** Matriculation (paid once) \$5; tickets, full course, \$75; demonstrator, \$10; diploma, \$30.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1879-80	64	8	12+
1880-81	105	38	36+
1881-82	126	37	29+
1882-83	104	37	35+

Average percentage of graduates to matriculates, during the past four years, *thirty*.

**IDAHO.**

Population, 32,610. Number of physicians, 51. Number of inhabitants to each physician, 640.

Dr. JESSE K. DUBOIS, of Boise City, writes: There are no laws governing the practice of physic, in this Territory. Our legislature meets biennially, and last winter we attempted to have a bill passed regulating the practice, but without avail. The profession is represented by some good men and honest men. There are others not so good or honest. But the members of the legislature do not seem inclined to protect the profession from the invasion of adventurers and charlatans from the eastern States and California, and we have no means of relief. It would be desirable to have some regulations, but there are no chances for that for two years at least.

**ILLINOIS.**

Population, 3,331,644. (based on school census, June, 1882.) Number of physicians, 5716\*. Number of inhabitants to each physician, 582.

WHILE still a territory and sparsely settled, only along the river fronts and water courses of Southern Illinois, efforts were already being made by the pioneer practitioners to regulate the practice of medicine and to foster and encourage the cause of medical education. In 1817 an act of the Territorial Legislature—with a preamble reciting that "well regulated medical societies have been found to contribute to the diffusion of true science and particularly to the knowledge of the healing art"—divided the Territory into two medical districts; all that portion of the territory lying east of the meridian line "running due north from the mouth of Ohio," formed the Eastern Medical District, and that west of said line formed the Western Medical District. In the former, Drs. I. D. WOLVERTON, JAMES E. THROGMORTON, THOMAS SHANNON, HENRY OLDHAM, JAMES WILSON, JOHN REID, AMOS CHIPP, SAMUEL R. CAMPBELL and HARDIN M. WETTERFORD were authorized

\*This includes all physicians engaged in practice—as well those exempt from the Medical Practice Act by reason of length of practice in the State before the passage of the Act, as those holding certificates or licenses from the STATE BOARD OF HEALTH. There are, in addition, about 535 graduates and licentiates not engaged in practice, including dentists, druggists, and others engaged in commercial or other pursuits, and also those who have retired—making the total, 5,251.

to meet at Carmi (White county); and in the latter, Drs. JOSEPH BOWERS, "TODD of Edwardsville," "HANCOCK and HEATH of St. Clair," CALDWELL CARNES, GEORGE FISHER, W. L. REYNOLDS, GEORGE CADWELL and "PENN of Kaskaskia," were empowered to meet at Kaskaskia (Randolph county,) "on the first Monday of May, in the year of our Lord eighteen hundred and eighteen," and there proceed to the choice of officers for the respective societies so constituted.

Section 2 directed that these societies should hold annual meetings and endowed them with the usual powers, duties and responsibilities of corporate bodies. Sec. 3 empowered them to examine students and grant diplomas, charging a fee of ten dollars for each diploma. Sec. 4 provided for the appointment of censors, authorized to examine students; those passing such examination receiving a license from the president of the society which entitled them "to practice physic or surgery, or both, until the next annual meeting," at which it is inferred they were then provided with the diploma. Sec. 5 made it unlawful for any person, after the organization of the said societies, to commence practice without passing the examination and obtaining the diploma; the penalty for so doing being disqualification "forever thereafter," for the collection of any debts incurred by such unauthorized practice. Sec. 6 empowered the societies to acquire and hold property, real and personal, to the amount of twenty thousand dollars each. Sec. 7 concerned the right of the societies to make by-laws, rules and regulations. Sections 8 and 9 related to the fiscal affairs of the societies, the duties of the treasurer and president in relation thereto, and to the duties of the secretary. Sec. 10 provided for the assessment of members, not exceeding ten dollars annually, "for the purpose of procuring a medical library and apparatus, and for the encouragement of useful discoveries in chemistry, botany, and such other improvements as the majority of the society shall think proper." Sec. 11 recognized the right of any one to come into the Territory to practice who was duly authorized to practice in the State, Territory or country from which he came, and "having a diploma from any such medical society." Sections 12 and 13 provided for alteration, modification or repeal of the act, and declared it in force from and after its passage, December 31, 1817.

Within a year after the passage of this act the State was admitted into the Union, December 3, 1818, and there is no record that any action was taken to carry out its provisions. During the session of the first General Assembly the following act was passed:

#### AN ACT for the Establishment of Medical Societies. Approved March 24th, 1819.

SECTION 1. Be it enacted by the People of the State of Illinois, represented in the General Assembly: That the State shall be divided into four medical districts, in each of which there shall be held a board of physicians. The counties of Bond, Madison, Washington, St. Clair and Monroe shall form the first district; it shall be the duty of each and every practicing physician to meet at the town of Belleville, on the second Monday in May next. The counties of Franklin, Johnson, Alexander, Union, Jackson and Randolph shall form the second district, and hold their meeting in Brownsville, on the same day. The counties of Pope, Gallatin, White and Jefferson shall form the third district, and meet on the same day at Shawneetown. The counties of Edwards, Crawford, Wayne and Clark shall form the fourth district, and meet at the town of Palmyra, on the day before mentioned. And being so convened as aforesaid, or any of them, being not less than five in number, shall proceed to the choice of president, vice president, secretary and treasurer, who shall hold their offices for one year and until others are chosen in their places.

§ 2. And be it further enacted, That whenever said societies shall be organized as aforesaid, they are hereby declared bodies corporate and politic in fact and in name, by the name of the medical society of the district where such societies shall be respectively formed, and by that name shall in law be capable of suing and being sued, pleading and being impleaded, answering and being answered unto, defending and being defended, in all matters and causes whatsoever, and shall and may have a common seal, and may alter and renew the same at pleasure. And the said medical societies shall and may agree upon the times and places of their next meeting.

§ 3. And be it further enacted, That said societies established as aforesaid, shall have power to examine all students who may make application for that purpose and grant diplomas under the hand and seal of the president, before whom such student may be examined: Provided, that nothing in this act shall be so construed as to prevent any person coming from any other place from practising in this State, such person producing to either of said societies a diploma from any respectable university of the United States, or any other country. And the person receiving such diploma shall, upon the receipt of the same, pay to the treasurer of said society the sum of ten dollars for the use of said society.

§ 4. And be it further enacted, That from and after the organization of the said medical societies, no person not having a diploma, or previously practicing in the State, shall commence the practice of physic and surgery, in either of the aforesaid districts, until he shall have passed an examination as hereinafter directed; and if any person shall so practice previous to having obtained a diploma, he shall thereafter be disqualified from collecting any debt or debts incurred by such practice, in any court or before any magistrate in this State.

§ 5. And be it further enacted, That the aforesaid medical societies shall, at such annual meetings, appoint a committee of five of their members, whose duty it shall be, or any two of them, at all times to examine such student as may make application for that purpose; and shall grant to such student a certificate, if qualified, which shall be sufficient to empower him to practice until the next meeting of such society, whereupon, by producing said certificate, the president shall grant a diploma agreeably to the rules and regulations of said society.

§ 6. And be it further enacted, That it shall and may be lawful for the medical societies established by this act, to purchase and hold any estate, real and personal, for the use of the societies respectively.



§ 7. And be it further enacted, That the societies established by this act shall be empowered to make such by-laws, rules and regulations, relative to the affairs and property of said societies, as they or a majority of their members shall deem most proper and correct: Provided, that the by-laws, rules and regulations be not contrary to, nor inconsistent with, the Constitution of the United States or of this State.

§ 8. And be it further enacted, That it shall be the duty of every physician, residing within the bounds of either of the aforesaid districts, to keep a true and accurate record of all the births, deaths and diseases which may take place within the vicinity of his practice, which record, or a copy of the same, he shall transmit to the president of the society, and which list or record shall be by the president published in one or more newspapers of this State; and any physician refusing or failing to make out the aforesaid list or record, and transmitting the same as aforesaid, shall pay to such society as he may belong, the sum of ten dollars for the use of said society.

§ 9. And be it further enacted, That if any physician residing in this State at the passage of this act, shall refuse to attend on the second Monday in May next, or any other of the stated meetings of said societies, [he] shall pay to the treasurer of the society of which he is a member, the sum of five dollars, unless a good and sufficient excuse shall be given at the next meeting of said society.

§ 10. And be it further enacted, That it shall be the duty of each society to deputize one of its members as a member of a general or State society, which shall be held each year at the seat of government, and organized in the same manner as the district societies first before mentioned.

§ 11. And be it further enacted, That the board of physicians may examine medical bills, which may be by the patient considered exorbitant, and make such deductions as may to them seem reasonable; and when such deduction is made, it shall be obligatory on the physician making the same, to return such part or surplus as may be unreasonably made, which may be recovered before any justice of the peace or court of law, with costs.

Two years later, January 3, 1821, the foregoing act was repealed, and the Fourth General Assembly then enacted the following:

AN ACT prescribing the mode of licensing physicians. Approved January 15, 1825.

Be it enacted by the People of the State of Illinois, represented in the General Assembly:

SECTION 1. That for the purpose of forming a board of censors, to grant license to practicing physicians in this State, there shall be five districts formed: the first district to be composed of the counties of Pike, Fulton, Greene, Morgan, Sangamon, Montgomery and Fayette; the second district, of the counties of Jackson, Randolph, Monroe, St. Clair, Madison and Bond; the third district, of the counties of Alexander, Pope, Gallatin, Johnson, Franklin and Union; the fourth district, of the counties of White, Edwards, Wabash, Lawrence, Edgar, Clark and Crawford; the fifth district, of the counties of Washington, Clinton, Wayne, Clay, Marion, Jefferson and Hamilton; and the practicing physicians residing in the several districts, shall meet at Carrollton, for the first district; at Belleville, for the second district; at Golconda, for the third district; at Albion, for the fourth district; at Mt. Vernon, for the fifth district, on the first Monday in June, and hold an election among themselves, under such regulations as they, or a majority of them, may adopt, for one censor in each district; and the five censors, so-elected, shall meet at the seat of government, on the first Monday of November next, and they, or a majority of them, shall form a board, for the purpose of examining and ascertaining the qualifications of those who wish to practice physic in this State, and grant a license to such as they may find properly qualified. It shall not, however, be necessary for any one to make personal application, who may heretofore have obtained the diploma of any respectable medical college, or the license of any respectable medical society; and upon sending such diploma or certificate to the said board of censors, they shall, upon being satisfied of the authenticity thereof, issue their license to such person to practice in this State.

§ 2. Be it further enacted, That after the meeting of the board of censors, the resident physicians of each district having obtained the certificate of said board, shall meet at such time and place, within their respective districts, as the censor thereof may appoint; notice of which shall be given by said censors, by advertising the same not less than three times in some public newspaper printed in this State; at which meeting they, or a majority of them, may authorize one or more of their body to examine physicians emigrating to this State or those wishing to commence the practice of physic, and grant them a license, if they may deem them qualified.

§ 3. Be it further enacted, That if any person should practice physic, without obtaining a license as aforesaid, he shall be deemed an illegal practitioner, and shall be debarred from recovering any debt or debts which may accrue from such practice; and if he charges for such practice, he shall forfeit and pay for every such offence, the sum of twenty dollars, to be recovered before any justice of the peace, in the county where such offence may be committed, by any person who may prosecute for the same; and the justice before whom such conviction may be had, shall pay the amount thereof to the overseers of the poor of said county for the use of the poor therein; and it shall be the duty of the overseers of the poor to prosecute for the same whenever it shall come to their knowledge that an illegal practitioner is practicing and receiving pay therefor: *Provided, always,* that students practicing under the direction of legal practicing physicians, shall not be subject to such penalty.

§ 4. Be it further enacted, That it shall be the duty of all justices of the peace, as well as of the circuit court, to inspect and allow all physicians' bills, whenever the same shall come before them, when suit shall be brought on the same, and shall instruct the jury, both in relation to the proof necessary to establish the same; and it shall be in the power



of the jury to reduce the charge to a reasonable amount, if the same shall be overcharged: *Provided*, that the justice of the peace shall select a jury of not less than six householders, resident in the county, which judgments shall be subject to appeals as in all other cases.

§ 5. Be it further enacted, That the board of censors are hereby required to lay before the next General Assembly, a plan for their consideration, by which a permanent system may be adopted for better regulating the practice of medicine.

This act had even a shorter life than its predecessors, for one of the first measures of the next General Assembly was its repeal, January 25, 1826. A perusal of the provisions of these various efforts readily indicates the causes of their miscarriage. The territory was too new; the community sparse and widely scattered; the number of physicians few; facilities for travel and intercourse were wanting; mails were infrequent—and, withal, there were other questions, doubtless considered of more vital importance, than the statutory regulation of the practice of medicine.

At least five other unsuccessful attempts were subsequently made before the passage of the acts now in force. In 1868 a bill for "An Act for the better Regulation of the Practice of Medicine and Surgery in the State of Illinois," was drafted by Drs. DAVID S. BOOTH and H. R. GUTHRIE, of Sparta, Randolph county, and was entrusted to the Hon. JOHN M. MCCUTCHEIN, member of the Twenty-Sixth General Assembly. Nothing, however, was done with this bill at that session, and it was finally presented to the Southern Illinois Medical Association, at its second meeting, in June, 1875. At a subsequent meeting the association appointed Dr. BOOTH and Dr. S. H. BUNDY, (then of Marion, Williamson county, subsequently of Metropolis, Massac county,) a committee to urge the Legislature to action on the subject; but it was not until toward the close of the session of the Thirtieth General Assembly, May, 1877, that the present acts were finally passed.

The Medical Practice Act, now in the seventh year of successful operation, differs materially from the bill drafted by Drs. BOOTH and GUTHRIE, and even the most sanguine were more or less disappointed with the form it finally assumed. Little, if any, practical improvement in the status of the profession was at first anticipated from its enactment, while many prophesied the speedy repeal both of this act and of its complement, the State Board of Health Act. The full text of the Act to Regulate the Practice of Medicine, and those sections of the State Board of Health Act which relate to it, are here given:

**AN ACT to Create and Establish a State Board of Health in the State of Illinois.** Approved May 25, 1877; in force July 1, 1877. [Only those sections are here given which have a bearing upon the Act to Regulate the Practice of Medicine.]

**APPOINTMENT OF MEMBERS; TERM OF OFFICE; VACANCIES; SECTION 1.** Be it enacted by the People of the State of Illinois, represented in the General Assembly, That the Governor, with the advice and consent of the Senate, shall appoint seven persons, who shall constitute the **BOARD OF HEALTH**. The persons so appointed shall hold their offices for seven years: *Provided*, that the terms of office of the seven first appointed shall be so arranged that the term of one shall expire on the thirtieth day of December of each year, and the vacancies so created, as well as all vacancies occurring otherwise, shall be filled by the Governor, with the advice and consent of the Senate: And provided, also, that appointments made when the Senate is not in session may be confirmed at its next ensuing session.

**MEETINGS OF THE BOARD: § 10.** The first meeting of the **BOARD** shall be within fifteen days after their appointment, and thereafter in January and June of each year, and at such other times as the **BOARD** shall deem expedient. The meetings in January of each year shall be in Springfield. A majority shall constitute a quorum. They shall choose one of their number to be president, and they may adopt rules and by-laws for their government, subject to the provisions of this act.

**AN ACT to Regulate the Practice of Medicine in the State of Illinois.** Approved May 29, 1877; in force July 1, 1877.

**ADMISSIONS TO PRACTICE MEDICINE: SECTION 1.** Be it enacted by the People of the State of Illinois, represented in the General Assembly, That every person practicing medicine, in any of its departments, shall possess the qualifications required by this act. If a graduate in medicine, he shall present his diploma to the **STATE BOARD OF HEALTH** \* \* \* for verification as to its genuineness. If the diploma is found genuine, and if the person named therein be the person claiming and presenting the same, the **STATE BOARD OF HEALTH** \* \* \* shall issue its certificate to that effect, signed by all of the members thereof, and such diploma and certificate shall be conclusive as to the right of the lawful holder of the same to practice medicine in this State. If not a graduate, the person practicing medicine in this State shall present himself before said **BOARD**, and submit himself to such examination as the said **BOARD** shall require; and, if the examination be satisfactory to the examiners, the said **BOARD** shall issue its certificate in accordance with the facts, and the lawful holder of such certificate shall be entitled to all the rights and privileges herein mentioned.

§ 2 [This section is omitted as void, by reason of the passage, at the same session, of the act establishing a **STATE BOARD OF HEALTH**. The section refers to the mode of providing boards of examiners in the absence of such **STATE BOARD**. The omissions indicated by asterisks in section 1, and in the remaining sections, also have reference to this provision for other boards.]

**ORGANIZATION, DUTIES AND POWER OF STATE BOARD: Sec. 3.** The **STATE BOARD OF HEALTH** \* \* \* shall organize within three months after the passage of this act; they shall procure a seal, and shall receive, through their secretary, applications for certificates and examinations; the president \* \* \* shall have authority to administer oaths, and the **BOARD** to take testimony in all matters relating to their duties; they

shall issue certificates to all who furnish satisfactory proof of having received diplomas or licenses from legally chartered medical institutions in good standing; they shall prepare two forms of certificates, one for persons in possession of diplomas or licenses, the other for candidates examined by the BOARD; they shall furnish to the county clerks of the several counties a list of all persons receiving certificates. In selecting places to hold their meetings, they shall, as far as is reasonable, accommodate applicants residing in different sections of the State, and due notice shall be published of all their meetings. Certificates shall be signed by all the members of the BOARD granting them. \* \* \*

**VERIFICATION OF DIPLOMAS: FEE AND PENALTY:** § 4. Said STATE BOARD OF HEALTH \* \* \* shall examine diplomas as to their genuineness, and if the diploma shall be found genuine as represented, the secretary of the STATE BOARD OF HEALTH \* \* \* shall receive a fee of one dollar from such graduate or licentiate, and no further charge shall be made to the applicants; but if it be found to be fraudulent, or not lawfully owned by the possessor, the BOARD shall be entitled to charge and collect twenty dollars of the applicant presenting such diploma. The verification of the diploma shall consist in the affidavit of the holder and applicant that he is the lawful possessor of the same, and that he is the person therein named. Such affidavit may be taken before any person authorized to administer oaths, and the same shall be attested under the hand and official seal of such officer, if he have a seal. Graduates may present their diplomas and affidavit as provided in this act, by letter or by proxy, and the STATE BOARD OF HEALTH \* \* \* shall issue its certificate the same as though the owner of the diploma was present.

**EXAMINATION OF NON-GRADUATES:** § 5. All examinations of persons not graduates or licentiates shall be made directly by the BOARD, and the certificate given by the BOARD shall authorize the possessor to practice medicine and surgery in the State of Illinois.

**CERTIFICATES MUST BE RECORDED:** § 6. Every person holding a certificate from the STATE BOARD OF HEALTH \* \* \* shall have it recorded in the office of the clerk of the county in which he resides, and the record shall be endorsed thereon. Any person removing to another county to practice shall procure an endorsement to that effect on the certificate from the county clerk, and shall record the certificate, in like manner, in the county to which he removes, and the holder of the certificate shall pay to the county clerk the usual fee for making the record.

**RECORD BOOK TO BE KEPT BY COUNTY CLERK:** § 7. The county clerk shall keep, in a book provided for that purpose, a complete list of the certificates recorded by him, with the date of the issue. \* \* \* If the certificate be based on a diploma or license, he shall record the name of the medical institution conferring it, and the date when conferred. The register of the county clerk shall be open to public inspection during business hours.

**FEE FOR EXAMINING NON-GRADUATES:** § 8. Candidates for examination shall pay a fee of five dollars, in advance, which shall be returned to them if a candidate be refused. The fees received by the BOARD shall be paid into the treasury. \* \* \*

**CHARACTER OF EXAMINATION:** § 9. Examinations may be in whole or in part in writing, and shall be of an elementary and practical character, but sufficiently strict to test the qualifications of the candidate as a practitioner.

**CERTIFICATES MAY BE REFUSED OR REVOKED:** § 10. The STATE BOARD OF HEALTH \* \* \* may refuse certificates to individuals guilty of unprofessional or dishonorable conduct, and they may revoke certificates for like causes. In all cases of refusal or revocation, the applicant may appeal to the body appointing the BOARD.

**DEFINITION OF "PRACTICING MEDICINE":** § 11. Any person shall be regarded as practicing medicine within the meaning of this act, who shall profess publicly to be a physician, and to prescribe for the sick, or who shall append to his name the letters of "M. D." But nothing in this act shall be construed to prohibit students from prescribing under the supervision of preceptors, or to prohibit gratuitous services in cases of emergency. And this act shall not apply to commissioned surgeons in the United States army and navy.

**LICENSE TO ITINERANT VENDERS:** § 12. Any itinerant vender of any drug, nostrum, ointment or appliance of any kind, intended for the treatment of disease or injury, or who shall, by writing or printing, or any other method, publicly profess to cure or treat diseases, injury or deformity by any drug, nostrum, manipulation or other expedient, shall pay a license of one hundred dollars a month, to be collected in the usual way.

**PENALTIES FOR NON-COMPLIANCE WITH THIS ACT:** § 13. Any person practicing medicine or surgery in this State without complying with the provisions of this act, shall be punished by a fine of not less than fifty dollars nor more than five hundred dollars, or by imprisonment in the county jail for a period of not less than thirty days nor more than three hundred and sixty-five days, or by both such fine and imprisonment, for each and every offense; and any person filing, or attempting to file, as his own, the diploma or certificate of another, or a forged affidavit of identification, shall be guilty of a felony, and, upon conviction, shall be subject to such fine and imprisonment as are made and provided by the statutes of this State for the crime of forgery, but the penalties shall not be enforced till on and after the thirty-first day of December, eighteen hundred and seventy-seven: *Provided*, that the provisions of this act shall not apply to those that have been practicing medicine ten years within this State.

#### ILLINOIS STATE BOARD OF HEALTH.

Organized July, 1877.—First examination was held November 1, 1877. Examinations are now held in Chicago or Springfield once annually.

This BOARD, in accordance with the Medical Practice Act of Illinois, grants licenses to practice medicine and surgery within the State.

The following are extracts from the act conferring this power—see full text above:

The STATE BOARD OF HEALTH \* \* \* shall receive through its secretary applications for certificates and examinations. \* \* \* If not a graduate, the person practicing medicine in this State shall present himself before said BOARD, and submit himself to such examination as the said BOARD shall require; and if the examination be satisfactory to the examiners, the said BOARD shall issue its certificate in accordance with the facts, and the lawful holder of such certificate shall be entitled to all the rights and privileges herein mentioned.

It shall prepare two forms of certificates, one for persons in possession of diplomas or licenses, the other for candidates examined by the BOARD; and shall furnish to the county clerks of the several counties a list of all persons receiving certificates.

The STATE BOARD OF HEALTH may refuse certificates to individuals guilty of unprofessional or dishonorable conduct, and may revoke certificates for like causes. In all cases of refusal or revocation the applicant may appeal to the body appointing the BOARD.

§ 8. Candidates for examination shall pay a fee of five dollars, in advance, which shall be returned to them if a certificate be refused.

§ 9. Examinations may be made wholly or in part in writing, and shall be of an elementary and practical character, but sufficiently strict to test the qualifications of the candidate as a practitioner.

All examinations of persons not graduates or licentiates, shall be made directly by the BOARD, and the certificates given by the BOARD shall authorize the possessor to practice medicine and surgery in the State of Illinois.

Where the candidates have any special views of theory and practice of medicine or of therapeutics, respect is paid to such views, and they are allowed, upon request, to appear before individual members of the BOARD for special examination in such branches. Examinations are conducted in the English language. If made in another language, interpreters must be furnished at the expense of the applicant.

All candidates must pass a preliminary examination, such as is indicated in the "minimum requirements," and must fill out the following:

*Application for Examination before the Illinois State Board of Health, under the Act to Regulate the Practice of Medicine in the State of Illinois.*

1. Name in full.....
  2. Nativity and age—(must be at least twenty-one years of age).....
  3. Residence and postoffice.....
  4. Time spent in professional studies—(must be at least three years).....
  5. Physician or preceptor under whom the studies were pursued, with postoffice address—(must be a licentiate of the BOARD or reputable practitioner).....
  6. Courses of medical lectures attended.....
  7. Name of medical school attended—(time spent at schools not recognized by the BOARD, will not be counted).....
  8. Time spent in hospital, if any.....
  9. Time of practice, if any.....
  10. School of practice chosen.....
  11. References as to character—(must present certificate of good character from two licentiates of the BOARD or reputable practitioners).....
- Approved.....188.....

.....  
President of the BOARD.

#### *Subjects of Examination.*

1, anatomy; 2, materia medica; 3, theory and practice; 4, gynecology; 5, physiology; 6, pathology; 7, obstetrics; 8, chemistry; 9, surgery; 10, hygiene; 11, medical jurisprudence. Eighty per cent. of correct answers required.

We have examined this applicant and find him to stand as above.

Signed by the members of the BOARD.

NUMBER of candidates examined, 636. Number of candidates licensed, 196. Number of licentiates now practicing in the State, 80—the discrepancy being accounted for by removals or by having subsequently graduated.

During the past year eighteen candidates applied for examination; thirteen of these were examined, but failed to come up to the required standard. The remaining five made no attempt to pass on any of the branches.

#### RUSH MEDICAL COLLEGE.

Chicago, Ill. (Pop. 560,693, school census, June, 1882.)

Organized 1812. The first class graduated in 1813. Classes have graduated each subsequent year.—The faculty embraces fourteen professors, two adjunct professors, twelve lecturers and assistants and seven demonstrators.

COURSE OF INSTRUCTION: "Instruction is given in this institution by lectures, clinics, practical work in the dissecting room and laboratories, and by repeated oral examinations." One regular course of twenty weeks, one spring or reading course of sixteen weeks, and one practitioners' course of four weeks, are held annually. Graded course of



three years recommended but not required.—Lectures embrace the principles and practice of medicine, obstetrics and diseases of children, surgery, diseases of the chest, eye and ear, gynecology, physiology, diseases of the nervous system, materia medica, therapeutics, medical jurisprudence, anatomy, chemistry, pharmacy, toxicology, dermatology, venereal diseases, hygiene, dental surgery and pathology, dental anatomy and physiology, diseases of children, physical diagnosis, microscopy, histology, pathology and laryngology.

**REQUIREMENTS :** For admission, a matriculation examination which will include the writing of a brief paper on a subject to be given; and an examination in the elementary principles of physics and mathematics as taught in the public schools of the country will be required. The written paper will be a sufficient indication of the student's knowledge of orthography, as well as the subject given. Graduates of a literary or scientific college, academy or high school, or who have passed the entrance examination to a literary college in good standing; or persons having a State or county teacher's certificate; or graduates in medicine; or previous matriculates of this college; or students who desire to pursue a special course of study—other than for the purpose of securing the degree—will be exempt from examination. Students who have completed a full course of study equivalent to that required for admission to this college, may, by special arrangement, be admitted on the certificates of their instructors.—For graduation: (1) age, twenty-one years, (2) good moral character, (3) three years' study, (4) two full courses of lectures, (5) clinical instruction for two terms; (6) dissection of each region of the body; (7) one course in practical chemistry; (8) "full and satisfactory written or oral examination on each branch taught in the college."

**FEES :** Matriculation, \$5; lectures, \$75; demonstrator, \$5; chemistry, \$5; final examination, \$30.

**STUDENTS:** Number of matriculates and graduates at each session reported, and percentage of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percentage.
1877-78	379	128	33.8
1878-79	364	122	33.5
1879-80	481	147	30.5
1880-81	559	172	30.7
1881-82	583	185	31.7
1882-83	549	183	33.3

Average percent. of graduates to matriculates during the past six years, *thirty-two*.

Number of Illinois students during the past year, 246.

Number of graduates in Illinois, 909.

#### MEDICAL DEPARTMENT OF ILLINOIS COLLEGE,

Jacksonville, Ill.

Organized in 1843.—Suspended lectures in 1848. Graduates in Illinois, 10.

**REMARKS:** The faculty, as given in the catalogues and announcements still extant, embraced six professors, three of whom resided at Jacksonville, one at Springfield, one at Alton and one at Geneva, Kane county; and who lectured on chemistry, physical "atology," obstetrics, diseases of women and children, surgical and pathological anatomy, surgery, principles and practice of medicine, materia medica, therapeutics, anatomy and physiology. The course of lectures was of sixteen weeks' duration. The fees were: Lectures, \$60; dissection, \$5; matriculation, \$3; graduation, \$20. The requirements for graduation were, (1) thorough course of study with some practitioner, (this course, according to the last catalogue, must extend over three years,) (2) two full courses of lectures, provided, however, that several years of reputable experience in the practice of medicine may be accepted in the place of one course of lectures, (3) full and satisfactory examination in all the branches of medical study, (4) thesis. Students applying for graduation were expected to possess a competent English and classical education. Dissection was optional. During its existence instruction was given to about seventy-five students, and thirty-seven were graduated.

#### MEDICAL DEPARTMENT, UNIVERSITY OF ST. CHARLES.

St. Charles, Ill.

Organized in 1847.—Annual courses of lectures were delivered until 1848, when the institution was transferred to Rock Island, and subsequently, in 1850, to Keokuk, Iowa, when it became the medical department of the University of Iowa, now the Keokuk College of Physicians and Surgeons.

#### ROCK ISLAND MEDICAL COLLEGE.

Rock Island, Ill.

Organized in 1849. Lectures were delivered during the years 1849-50. College extinct. Graduates in Illinois, one.



## CHICAGO MEDICAL COLLEGE.

(Medical Department, Northwestern University.)

## Chicago, Ill.

Organized in 1859 as the Medical Department of Lind University. It continued under that name and connection until 1864, when it became independent under the name of the Chicago Medical College and remained independent of all connections until 1869 when it assumed its present name and relation.—The faculty embraces eighteen professors, one lecturer and two demonstrators.

**COURSE OF INSTRUCTION:** Graded, comprising three annual consecutive terms of twenty-four weeks each. Accredited certificates of one year's study entitle holders to enter as second-course students after satisfactory examination in studies of first-year course. Certificates of two years' study and of attendance on one full course of lectures entitle to entry as third-course students after examination in studies of first and second years. **Studies:** First-year course—Descriptive anatomy, physiology, histology, practical microscopy, general chemistry. Second-year course—Surgical anatomy, operations in surgery, general pathology, pathological anatomy, general therapeutics, state medicine, public hygiene, nervous and mental diseases, medical chemistry, medical jurisprudence, dermatology, hospital and dispensary clinics. Third-year course—Theory and practice of medicine, clinical medicine, principles and practice of surgery, clinical surgery, gynecology, obstetrics, diseases of children, ophthalmology, otology, hospital and dispensary clinics. Daily examinations or quizzes, by each professor.

**REQUIREMENTS:** For admission, a certificate of graduation from a literary college, academy or scientific school; or satisfactory evidence, through matriculation examination, of a good English education.—For graduation: Evidence of (1) good moral character; (2) three years' study; (3) required age, twenty-one years; (4) attendance upon three courses, or two courses of lectures and sustaining satisfactory examination in studies embraced in first-year course of lectures; (5) dissection of three parts of the human body; (6) one year of hospital attendance; (7) passing all examinations; (8) satisfactory thesis.

**FEES:** For the college year, \$75; final examination, \$30; matriculation, \$5; demonstrator, \$5; laboratory, \$5; hospital, \$6; or for first-year course, \$90; second-year course, \$91; graduation course, \$111.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	153	50	32.6
1878-79	152	37	24.4
1879-80	148	38	25.6
1880-81	152	45	32.2
1881-82	155	39	25.1
1882-83	137	42	30.6

Average percentage of graduates to matriculates during the past six years, *twenty-seven*.

The total number of matriculates in the twenty-four years of the existence of this college has been 2651, and the total number of graduates 832. Average percent. of matriculates to graduates (24 years) 31.

Number of Illinois students during the past year, 79.

Number of graduates in Illinois, 356.

**REMARKS:** The establishment of this school was the first attempt in this country to place medical college education upon a full graded and systematic plan, in accordance with the same principles that govern in all other branches of education. It also made actual attendance upon hospital clinical instruction during at least one college term, one of the regular requirements for graduation. The plan thus adopted in the beginning has been continued to the present time, making such changes only as would render the system more complete in its practical working.—(*Contributions to the History of Medical Education and Medical Instruction in the United States, 1776-1876*. By N. S. DAVIS, A. M., M. D., p. 40.)

During the last thirteen years between eighty and ninety per cent. of the graduates of this college have passed through the regular three courses of instruction.

## HAHNEMANN MEDICAL COLLEGE AND HOSPITAL.

## Chicago, Ill.

Organized in 1859. The first class graduated in 1860. Classes have graduated each subsequent year.—The faculty embraces twelve professors, one assistant and one demonstrator.

**COURSE OF INSTRUCTION:** One regular course of twenty weeks, and one practitioners' course of six weeks' duration annually. The instruction given is largely clinical and practical.—Lectures embrace principles and practice of medicine, obstetrics, medical and surgical diseases of women, principles and practice of surgery, materia medica, therapeutics, ophthalmology, otology, chemistry, toxicology, descriptive and practical anatomy, physiology, histology, minor surgery. "The important department of medical jurisprudence and public hygiene will be taught by one thoroughly competent, but who is yet to be appointed."

**REQUIREMENTS:** For admission—"Upon application for admission each student must possess a good moral character, and must present to the registrar satisfactory evidence of a good English education. Such as are graduates of a literary or scientific college, academy, or high school, or who have passed the entrance examination to a literary college in good standing; who have a county or state teacher's certificate; graduates in medicine; previous matriculates of this college; and students who desire to pursue a special course of study—other than for the purpose of securing the degree—will be exempt from this requirement, providing they furnish this documentary evidence to the registrar. Students who have completed a full course of study equivalent to that required for admission to this college, may, by special arrangement, be admitted on the certificates of their instructors. It is not intended to make this a critical examination; but what is required and insisted upon is, that every student shall possess a fair English education."—For graduation: (1) good moral character; (2) twenty-one years of age; (3) two full courses of lectures; (4) satisfactory examination in (a) obstetrics and diseases of women, (b) surgery, (c) principles and practice of medicine, (d) materia medica and therapeutics, (e) physiology, (f) chemistry, (g) anatomy, (h) diseases of the eye and ear.

**FEES:** Matriculation, \$5; lectures, \$50; graduation, \$25; hospital free to matriculates; demonstrator, \$5.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	165	94	50.7
1878-79	197	67	34 +
1879-80	205	87	42.4
1880-81	195	100	51 +
1881-82	264	108	40.9
1882-83	297	134	45 +

Average percent. of graduates to matriculates, during the past six years, *forty-four*.

The total number of matriculates in twenty-three years (spring-course students counted for seven years,) 2894; graduates, 1014. Average percent. of graduates to matriculates, 35.

Number of Illinois students during the past year, 86.

Number of graduates in Illinois, 302.

**REMARKS:** "Should any candidate for graduation fail in the final examination, he will be entitled to demand a re-examination at any subsequent session, without the necessity of further attendance upon lectures."

"The board of trustees feel that the graded course, as adopted by some colleges, is really designed to throw chaff in the eyes of the medicine pupil and profession. For if the students are passed on certain branches at the end of each term, they practically graduate at the end of three or more terms on one course of lectures and not upon three courses of instruction."

"Those students who passed satisfactory examinations last year on certain branches will be accorded credit for the same this year."—*Extracts from The Annual Announcement, session of 1883-84.*

## BENNETT COLLEGE OF ECLECTIC MEDICINE AND SURGERY.

Chicago, Ill.

Organized in 1868. The first class graduated in 1869. Classes have graduated each subsequent year.—Faculty embraces fourteen professors and two demonstrators.

**COURSE OF INSTRUCTION:** One course of lectures of twenty-four weeks' duration, annually, and a spring (reading) course of eight weeks' duration. "Tuition at this college is by didactic lectures, with demonstrations, clinical teaching, laboratory instructions with experiments, recitations and personal teaching in cases demanding physical manipulation."—Lectures embrace principles and practice of surgery, clinical surgery, obstetrics, gynecology, materia medica, therapeutics, clinical medicine, surgical anatomy, orthopedy, chemistry, pharmacy, toxicology, principles and practice of medicine, physiology, diseases of children, general and descriptive anatomy, ophthalmology, otology, diseases of the respiratory and circulatory organs and of the nervous system, electro-therapeutics, dermatology, venereal diseases, medical jurisprudence, dental pathology.

**REQUIREMENTS:** For admission, a good elementary English education, including mathematics, English composition and elementary physics, as attested by the presentation of a diploma of graduation from some literary and scientific college or high school, or by a creditable examination upon those branches by a committee appointed for that purpose.—For graduation: (1) the candidate must possess satisfactory references as to good moral character and have attained the age of twenty-one years; (2) three years' study; (3) must have attended two courses of lectures, with dissections, the last of which must be in this college—documentary evidence of these facts must be presented to the dean with the application; (4) must have completed the prescribed course of analytical chemistry; (5) sustain a satisfactory and honorable examination in every department.

**FEES:** Matriculation, \$5; lectures, \$50; demonstrator, \$10; analytical chemistry, \$10; graduating, \$25.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	139	65	46
1878-79	106	29	27
1879-80	123	37	30
1880-81	127	51	40
1881-82	113	38	33
1882-83	147	52	35

Average percent. of graduates to matriculates during the past six years, *thirty-six*.

Number of Illinois students during the last session, 49.

Number of graduates in Illinois, 205.

#### WOMAN'S MEDICAL COLLEGE OF CHICAGO.

Chicago, Ill.

Organized in 1870. The first class graduated in 1871. No class graduated in 1872. Classes have graduated each subsequent year.—The faculty embraces fourteen professors and one associate professor, two lecturers, four assistants, and two demonstrators.

**COURSE OF INSTRUCTION:** One annual graduating course of thirty weeks' duration. Instruction is given by didactic lectures and recitations, clinical lectures and practical work, and attendance on hospitals. Graded course of three years recommended but not required.

Lectures embrace gynecology, theory and practice of medicine, diseases of children, pathology, renal diseases, surgery, medical jurisprudence, diseases of the nervous system, obstetrics, anatomy, chemistry, toxicology, dermatology, ophthalmology, otology, diseases of chest and throat, physiology, materia medica, therapeutics, hygiene, histology.

**REQUIREMENTS:** For admission, (a) certificate of graduation from high school, or like institution, (b) teacher's certificate from county superintendent of schools, or (c) matriculation examination sufficient to prove a good English education; good moral character. For graduation: (1) three full years' study; (2) two full courses of lectures; (3) two full courses of dissection; (4) one course in practical chemistry; (5) twenty-one years of age; (6) satisfactory oral and written examination, (7) one course in hospital instruction.

**FEES:** Matriculation, \$5; lectures, \$50; laboratory, \$5; demonstrator, \$5; graduation, \$30.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	32	$\frac{1}{2}$	22—
1878-79	39	5	13—
1879-80	76	10	13 +
1880-81	77	17	22
1881-82	83	23	27
1882-83	79	18	22

Average percent. of graduates to matriculates during the past six years, *twenty*.

Number of Illinois students during the past year, 31.

Number of graduates in Illinois, 44.

**REMARKS:** The spring term has been abandoned, and the college year lengthened to seven, instead of five, months.

#### CHICAGO HOMEOPATHIC MEDICAL COLLEGE.

Chicago, Ill.

Organized in 1876. The first class graduated in 1877. Classes have been graduated each subsequent year.—The faculty embraces fifteen professors, two lecturers and three demonstrators.

**COURSE OF INSTRUCTION:** A regular session of twenty-two weeks' duration, and a spring session of six weeks' duration, annually. Three years' graded course recommended but not required. A junior and a senior course (two separate and distinct courses) are delivered during each college term. Clinics, hospital and dispensary.—Lectures embrace: Junior year, anatomy, physiology, histology, microscopy, materia medica, chemistry, toxicology, pharmacology, minor surgery, odontology, sanitary science and clinics. Senior year, institutes and practice of medicine and surgery, gynecology, pedology, materia medica, obstetrics, ophthalmology and otology, mental and nervous diseases, medical jurisprudence and clinics.



**REQUIREMENTS:** For admission, "All applicants for admission must possess good moral character, and present to the secretary such evidence of good English education as is required of matriculants in all other reputable medical colleges." The above, under the heading Requirements for Admission, was inserted in the Eighth Annual Announcement. Upon being informed that such a statement was unsatisfactory to the BOARD, and that graduates matriculated under this condition would be examined by the BOARD before being granted a license to practice in the State of Illinois, the college authorities issued a supplementary announcement containing the following:

"This college requires that all applicants for admission must possess good moral character, and present to the secretary satisfactory evidence of a good English education, such as is required of all matriculants by the STATE BOARD OF HEALTH OF ILLINOIS. It is not intended to make this examination technical or rigid, but that every student must possess a fair English education. Previous medical matriculants, graduates of colleges and high schools will be exempt from this examination."

For graduation: (1) twenty-one years of age; (2) three years' study; (3) two full courses; (4) practical anatomy to the extent of having dissected every region of the body; (5) pass all the regular examinations.

**FEES:** For the college year, \$75; final examination, \$30; matriculation, \$5; demonstrator, \$5; laboratory, \$5; hospital, \$6; or for first-year course, \$10; second-year course, \$91; graduation course, \$111.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	107	25	23.3
1878-79	110	31	28+
1879-80	86	20	23.2
1880-81	87	25	28.7
1881-82	128	38	29.6
1882-83	125	40	32

Average percent. of graduates to matriculates during the past six years, *twenty-seven*

Number of Illinois students during the past year, 64.

Number of graduates in Illinois, 81.

**REMARKS:** "The course has been lengthened one week since the last announcement. Female students are no longer admitted. They are excluded, not from any hostility, but because of the peculiar conditions by which they are surrounded."

#### COLLEGE OF PHYSICIANS AND SURGEONS OF CHICAGO.

Chicago, Ill.

Organized in 1882. First class graduated in 1883.—Faculty embraces twenty-one professors, seven lecturers, and two demonstrators.

**COURSE OF INSTRUCTION:** One regular course of twenty-three weeks' duration, a spring or reading course, and a practitioners' course of four weeks' duration. Graded course of three years recommended, but not required. "Instruction will be given by didactic and clinical lectures, practical work in the dissecting room, clinical and physiological laboratories and by oral and written examinations."—Lectures embrace descriptive and practical anatomy, physiology, chemistry, materia medica, therapeutics, laryngology, state medicine, public hygiene, medical jurisprudence, principles and practice of medicine and surgery, operative surgery, surgical pathology, surgical anatomy, obstetrics, ophthalmology, demonstrations of surgery, otology, diseases of children, gynecology, dermatology, orthopedic surgery, medical chemistry, diseases of the genito-urinary organs, dental surgery, mental and nervous diseases.

**REQUIREMENTS:** For admission:—"No previous reading or study of medicine is required before entering college;" (a) eighteen years of age; (b) good moral character; (c) a graduate or matriculate of a university or college, or a graduate of a high school, or holding certificate from any school board or superintendent of schools as qualified as teacher, or having certificate from a recognized medical society as being fitted to study medicine; (d) if not in the class (c) must pass such an examination as will show his education sufficient to enable him to engage in the study of medicine.—For graduation: (1) twenty-one years of age; (2) three full three years' study; (3) attendance on two courses of lectures; (4) a complete dissection; (5) attendance during two courses in hospital; (6) satisfactory examination in all branches taught in the college.

**FEES:** Matriculation, \$5; lectures, \$50; demonstrator, \$10; examination, \$30; hospital, \$5.

**STUDENTS:** Session of 1882-83—matriculates, 152; graduates, 52. Percent of graduates to matriculates, *thirty-four*.

Number of Illinois students during the past year, 65.

Number of graduates in Illinois, 9.



## QUINCY COLLEGE OF MEDICINE.

*(Medical Department, Chaddock College.)*

Quincy, Ill. (Pop. 28,268.)

Organized in 1882.—The faculty embraces eleven professors and one demonstrator.

**COURSE OF INSTRUCTION:** One regular course of twenty-two weeks' duration. Three years' graded course recommended, but not required. Lectures embrace the principles and practice of medicine and surgery, obstetrics, diseases of women, clinical surgery, chemistry, toxicology, anatomy, ophthalmology, otology, physiology, hygiene, clinical medicine, diseases of the mind and nervous system, and pharmacy. (The chair of materia medica and therapeutics was not filled at the time the announcement was issued.) Examinations, quizzes and reviews are given frequently.

**REQUIREMENTS:** For admission—"All applicants who can present evidence of a good English education sufficient to enable them to understand medical literature, and to readily and thoroughly comprehend the necessary technicalities of our profession, are eligible to our class. This may be made apparent by diplomas, evidence or certificates from proper authorities, or, in their absence, by oral or written examinations."—For graduation—(1) Twenty-one years of age; (2) good moral character; (3) two courses of lectures; (4) two courses of instruction in anatomy, including dissections and demonstrations; (5) three years' study; (6) "pass a creditable examination in all the branches taught in the institution."

**FEES:** Matriculation, \$5; lectures, \$10; demonstrator, \$10; examination, \$25.

**STUDENTS:** Session of 1882-83—matriculates, 6; graduates, 0. Number of Illinois students during the past year, 2.

## CHICAGO SCHOOL OF MIDWIFERY AND LYING-IN HOSPITAL.

Chicago, Ill.

Organized in 1880. The first course was given in 1880-81.—The faculty embraces three professors.

**COURSE OF INSTRUCTION:** One course of lectures, of twenty-four weeks' duration, is given annually. Lectures are delivered in English, German and Scandinavian. "Instruction at this institution is by didactic lectures, demonstrated by the bony pelvis, fetal skull, manikin, specimens, charts, and attendance upon cases of labor, either in the hospital or among outside patients. Every student must attend at least two obstetrical cases, under the supervision of the instructor, before graduating."

**REQUIREMENTS:** For admission—Students must pass a preliminary examination and furnish references as to moral character. For graduation—The candidate must be twenty-one years of age, and must have regularly attended one whole term. She must pass a rigid written examination, and have the required practical instruction. Eighty per cent. of the prescribed questions must be correctly answered.

**FEES:** Matriculation, \$5; lectures, \$50; graduation, \$5.

**STUDENTS:** Twelve candidates graduated at the close of the session of 1880-81, and eighteen at the close of the session of 1881-82.

**REMARKS:** Graduates of this school are required to pass examinations, conducted by the ILLINOIS STATE BOARD OF HEALTH, before certificates entitling them to practice midwifery in Illinois are granted them.

**INDIANA.**

Population, 1,978,301. Number of physicians, 4993. Number of inhabitants to each physician, 396.

There is no law regulating the practice of medicine in this State. By section 4995 of the Revised Statutes, "every physician in each town, city and county shall be required to report to the secretary of the board of health of such town, city or county such facts and statistics as may be required by him, under the direction of the county board, or of the State board of health, through such county board."

• Section 4995 provides that: "It shall be the duty of all physicians and accoucheurs in this State to register their names and post office address with the clerk of the circuit court of the county in which they reside; and all such physicians and accoucheurs shall report to the secretary of the board of health of the town, city or county in which they occur, and within fifteen days thereafter, all births and deaths which may occur under their supervision, with a certificate of the cause of death, and such correlative facts as

may be required in the blank forms furnished, as provided in this act. Any physician, accoucheur or householder willfully or purposely (after notice by the secretary of the local board under whose jurisdiction such householder may live) failing or refusing to comply with the provisions of this section, shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be fined in any sum not less than five dollars nor more than ten dollars."

Section 4996 requires the clerk of the circuit court of each county to keep a book especially prepared and set apart for the registration of names, and post office addresses of physicians and accoucheurs of such county. \* \* \* "Provided, that the clerk shall be entitled to charge each physician and accoucheur so registered a fee of ten cents, and no more."

Section 1921 provides that, "Whoever, in a state of intoxication, prescribes or administers any poison, drug or medicine to another, which endangers the life of such other person, shall be fined not more than one hundred dollars nor less than ten dollars, and imprisoned in the county jail not more than three months nor less than ten days." By section 1922, a similar penalty is ordained for any person who prescribes any secret medicine.

#### UNIVERSITY OF INDIANA.

New Albany, Ind.

Organized in 1833. The following interesting history of this, the first fraudulent medical school in the west, is taken from the minutes of the New York County Medical Society of the date December 16, 1833:

It appears that John Cook Bennett, M. D., LL. D., chancellor, secretary, etc., of this institution, journeyed to New York City in the summer of 1833, and, having appointed two members of the county medical society as assistants, proceeded "to examine candidates and dispense diplomas," the persons usually paying therefor the sum of twenty-five dollars. This proceeding becoming known to the society, a committee was appointed "to investigate and report on the subject of diplomas purporting to be issued by the University of Indiana." The committee reported—

(1.) That such an institution was in existence, having been incorporated by an act entitled "An act to incorporate the Christian College, in New Albany, in Floyd county, Indiana."

(2.) That said college was organized by a meeting of eight persons, at the house of Bennett, in New Albany.

(3.) That the said college, under its charter, claims, and probably exercises the right, to confer eight different kinds of degrees on males, and seven on females."

(4.) That this university embraces seven departments, including a department of medicine.

(5.) That John Cook Bennett was bishop and secretary of the general university, and president, chancellor, and professor of midwifery in the medical department.

(6.) By a by-law, the bishop was authorized to send out commissioners to confer degrees, etc.

(7.) That at the time of issuing the diplomas, this university did not possess buildings, apparatus or facilities of any kind to teach physic and surgery; had not given any full course of instruction, nor had any lectures on medical science been delivered.

And, finally, that the charges against the members of the society were true; whereupon the society publicly reprimanded the offenders.

#### INDIANA MEDICAL COLLEGE.

La Porte, Ind.

Organized in 1844.—Lectures were continued at this college until 1848, when the institution was removed to St. Charles, Ill., from thence to Rock Island, Ill., 1849, and finally to Keokuk, Iowa, where it remains as the College of Physicians and Surgeons of Keokuk.

Number of graduates in Illinois, 6.

#### MEDICAL COLLEGE OF EVANSVILLE.

Evansville, Ind. (Pop. 29,280.)

Organized in 1849. Classes were graduated during the years '50, '51, '52, '53 and '54, numbering 44 alumni. Lectures were suspended from '54 to '71; reorganized 1871. Classes have been graduated since 1873.—Faculty embraces ten professors, one lecturer, two assistants and one demonstrator.

COURSE OF INSTRUCTION: One nineteen weeks' course annually. "Examinations will be held at each lecture on the instructions of the previous day, and the standing and improvement of each student carefully noted." Dispensary and hospital clinics are afforded.—Lectures on principles and practice of medicine and surgery, obstetrics,

chemistry, toxicology, anatomy, diseases of nervous system, gynecology, ophthalmology, materia medica, therapeutics, venereal diseases, clinical surgery, physiology, diseases of children, minor surgery, practical anatomy, practical chemistry, histology, pathology and dermatology.

**REQUIREMENTS:** For admission, "Each student shall furnish evidence that he possesses a good moral character, a good English education, or pass an examination on mathematics, English grammar and composition and natural philosophy."—For graduation: (1) twenty-one years of age; (2) unexceptionable moral character; (3) three years' study; (4) two full courses of lectures; (5) practical anatomy during two courses; (6) practical chemistry during one course of lectures; (7) satisfactory examination on the various branches taught; (8) thesis.

**FEES:** Matriculation, \$5; lectures, \$40; demonstrator, \$5; graduation, \$25.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	37	21	56+
1878-79	36	14	38+
1879-80	25	5	20
1880-81	24	6	25
1881-82	17	11	64+
1882-83	16	7	43+

Average percent. of graduates to matriculates during the past six years, *forty-one*.

Number of Illinois students during the past year, 3.

Number of graduates in Illinois, 28.

#### PHYSIO-MEDICAL COLLEGE OF INDIANA.

Indianapolis, Ind. (Pop. 75 046.)

Organized in 1873. The first class was graduated in 1874. Classes have been graduated each subsequent year.—The faculty embraces nine professors and three lecturers.

**COURSE OF INSTRUCTION:** One course of twenty-three weeks annually.—Lectures embrace principles and practice of medicine, clinical medicine, principles and practice of surgery, obstetrics, diseases of women and children, botany, materia medica, therapeutics, histology, physiology, general, descriptive and surgical anatomy, microscopy, pathological histology, chemistry, toxicology, medical jurisprudence, sanitary science and diseases of the rectum. Clinics at the city hospital twice a week.

**REQUIREMENTS:** For admission, under the head of requirements for graduation the following statement is found: "applicants for graduation must give satisfactory evidence of having a good English education, the fact to be established by presentation of a diploma from a reputable literary college, or pass an examination by a board of censors." For graduation: (1) twenty-one years of age; (2) three years' study; (3) attendance at hospital clinics; (4) two courses of dissection; (5) good English education (see above); (6) "a competent knowledge of all the branches taught in this college; qualifications sufficient to rightly apply the principles inculcated in every-day practice, is the only basis upon which degrees are conferred."

**FEES:** Matriculation, (paid but once) \$5; hospital, \$3; lectures, \$75; demonstrator, \$5; graduation, \$25.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	19	8	42 +
1878-79	15	7	46 +
1879-80	15	8	53 +
1880-81	20	10	50
1881-82	24	10	40 +
1882-83	26	11	40 +

Average percent. of graduates to matriculates during the past six years, *forty-five*.

Number of Illinois students during the past year, 1.

Number of graduates in Illinois, 4.

#### MEDICAL COLLEGE OF FORT WAYNE.

Fort Wayne, Ind.

Organized in 1876. Classes were graduated in each year from 1877 to 1883, inclusive.

During the summer of 1883, the effects of the college were sold under execution, and the organization became extinct. (For what is stated to have been "all the furniture and all the illustrations of the entire establishment," a little over fifty dollars was received.)

Number of graduates in Illinois, 2.

## MEDICAL COLLEGE OF INDIANA

Indianapolis, Ind.

Organized in 1878, when the Indiana Medical College (organized 1868) and the College of Physicians and Surgeons of Indiana (organized 1873) were united to form this college. This college, formerly the medical department of Butler University, severed its connection with that institution in 1883.—The faculty embraces ten professors, four assistants, two demonstrators, a curator, and prosector.

**COURSE OF INSTRUCTION:** One regular term of twenty weeks' duration annually. The course of instruction covers two years; daily quizzes, clinics, and practical instruction are given.—Lectures embrace principles and practice of surgery, clinical surgery, theory and practice of medicine, gynecology, mental and nervous diseases, physiology, obstetrics, diseases of children, anatomy, materia medica, therapeutics, ophthalmology, otology, chemistry, toxicology.

**REQUIREMENTS:** For admission, in accordance with the schedule of the ILLINOIS STATE BOARD OF HEALTH.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) three years' study; (4) two full courses; (5) "examination by the faculty on all the branches of medicine."

**FEES:** Matriculation, \$5; laboratory, \$5; lectures, \$40; demonstrator, \$10; hospital, \$6; graduation, \$25.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1878-79	143	66	46 +
1879-80	182	60	33 —
1880-81	200	83	41.5
1881-82	164	58	35 +
1882-83	131	53	40.4

Average percent. of graduates to matriculates during the past four years, *thirty-nine*.

Number of Illinois students during the past year, 13.

Number of graduates in Illinois, 37.

## CENTRAL COLLEGE OF PHYSICIANS AND SURGEONS.

Indianapolis, Ind.

Organized in 1879. The first class was graduated in 1880. The faculty embraces eleven professors, three lecturers, three demonstrators, and one prosector.

**COURSE OF INSTRUCTION:** One preliminary course of one week's, and one regular winter course of twenty weeks' duration annually; three years' graded course recommended, but not required; clinical teaching is given at hospitals, city and college dispensary.—Lectures embrace anatomy, physiology, microscopy, histology, chemistry, materia medica, therapeutics, obstetrics, medical and surgical diseases of women, surgery, surgical pathology, ophthalmology, otology, laryngoscopy, principles and practice of medicine, mental and nervous diseases, sanitary science, and medical jurisprudence.

**REQUIREMENTS:** For admission, "satisfactory evidence of a good English education." Certificates of graduation from a high school or like institution, or a teacher's certificate from a county superintendent of schools, will be accepted as sufficient evidence of such education. Students who have attended one course of lectures, and practitioners in good standing, are exempt from this requirement.—For graduation: (1) good moral character; (2) twenty-one years of age; (3) three years' study; (4) two full courses of lectures; (5) must pass satisfactory examination in anatomy, including dissections, physiology, chemistry, materia medica, therapeutics, obstetrics, surgery, principles and practice of medicine, clinical medicine.

**FEES:** Matriculation, \$5; lectures, \$40; laboratory, \$5; demonstrator, \$5; hospital, \$6; graduation, \$25.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1879-80	42	12	28.5
1880-81	62	17	27.4
1881-82	43	10	23 +
1882-83	44	24	54.5

Average percent. of graduates to matriculates during the past four years, *thirty-three*.

Number of Illinois students during the past year, 1.

Number of graduates in Illinois, 4.

**REMARKS:** Dr. Eastman, Secretary, writes: "The candidate for graduation who makes 66% percent. in all departments is passed. Failing in one important chair, and making a very high average in other important chairs, he may be balloted for; but if he falls below in three chairs, he can, under no circumstances, have a ballot for graduation. Our school was organized to change the mode of graduation in Indiana, and we will stand up in line. The following is an extract from the fifth annual announcement: 'The time is close at hand when no medical school can afford to confer the degree of Doctor of Medicine upon any one not known to be qualified for the responsible duties of the profession.'"



## FORT WAYNE COLLEGE OF MEDICINE.

Fort Wayne, Ind. (Pop. 26,880).

Organized in 1879. The first class graduated in 1880.—The faculty embraces thirteen professors, two assistants and three lecturers.

**COURSE OF INSTRUCTION:** Graded course of three years recommended but not required; one course of twenty-two weeks' duration annually; clinical instruction given at hospital and dispensary.—Lectures embrace anatomy, physiology, chemistry, toxicology, materia medica, therapeutics, nervous and mental diseases, orthopedic surgery, hygiene and medical jurisprudence.

**REQUIREMENTS:** For admission: "Believing that the time has come when the public demands men of at least a fair degree of culture in the medical profession, we will require satisfactory evidence that the student has at least a fair proficiency in the fundamental branches of an English education. Evidence of graduation in a high school, academy or college, or a license to teach in the public schools, will be accepted." For graduation: (1) twenty-one years of age; (2) good moral character; (3) three years' study; (4) two full courses of lectures, not within the same twelvemonth; (5) dissection for one session; (6) instruction in chemistry during one session; (7) must have followed the practice of a hospital; (8) must pass monthly and terminal examinations; premature examination will be granted if good and sufficient reasons are given for requesting it.

**FEES:** Matriculation, \$5; lectures, \$40; demonstrator, \$5; laboratory, \$5; hospital, \$5; graduation, \$25.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1881-82	27	16	59 +
1882-83	25	12	48

Average percent. of graduates to matriculates during the past two years, *fifty-three*.

Number of graduates in Illinois, 2.

## INDIANA ECLECTIC MEDICAL COLLEGE.

Indianapolis, Ind.

Organized in 1880.—The faculty embraces thirteen professors and two demonstrators.

**COURSE OF INSTRUCTION:** One course of lectures of twenty weeks' duration annually. Will embrace, in addition to didactic lectures, as far as practicable, clinical instruction.—Lectures embrace physiology, anatomy, otology, ophthalmology, chemistry, toxicology, medical jurisprudence, hygiene, surgery, surgical pathology, principles and practice of medicine, obstetrics, materia medica, therapeutics, gynecology, dermatology, diseases of children.

**REQUIREMENTS:** For admission: "Every student must possess a good English education, including mathematics, English composition and elementary physics. A diploma from a high school or college is preferred."—For graduation: (1) twenty-one years of age; (2) three years' study; (3) two full courses of lectures; (4) must produce evidence of attendance on lectures on practical anatomy; (5) thesis or clinical report; (6) examination on the regular and essential branches of medicine; (7) good moral character.

**FEES:** Matriculation, \$5; demonstrator, \$5; lectures, \$40; graduation, \$25; laboratory, \$5.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1880-81	27	12	44.4
1881-82	19	11	58 +
1882-83	24	7	29 +

Average percent. of graduates to matriculates during the past three years, *forty-three*.

Number of Illinois students during the past year 3.

Number of graduates in Illinois, 3.

**REMARKS:** At the April, 1883, meeting of the ILLINOIS STATE BOARD OF HEALTH, charges against this college being under consideration, it was resolved that its diplomas would be recognized in the future by said BOARD *whenever, and so long as, it shall appear that its methods and practices entitle it to such recognition.*

## BEACH MEDICAL COLLEGE,

Indianapolis, Ind.

Organized in 1883. The faculty embraces eight professors.

**COURSE OF INSTRUCTION:** One preliminary course of twelve days' duration; one regular course of twenty weeks' duration, and one practitioner's course of eight weeks' du-

ration will be given annually.—Lectures embrace anatomy, surgery, theory and practice of medicine, obstetrics, materia medica, therapeutics, physiology, histology, gynecology, diseases of children, electro-therapeutics, chemistry, toxicology, botany, and medical jurisprudence (taught by the different chairs.)

**REQUIREMENTS:** For admission and graduation: Twenty-one years of age, testimonials of good moral character, and good English education, including mathematics, English composition, and elementary physics, or natural philosophy. Such proof to consist of a diploma of graduation from some literary and scientific college or high school; or be furnished by an examination, by a committee appointed for that purpose. The ninth "article of incorporation," printed in the announcement, provides that "no student shall be admitted to the graduating class, without furnishing to the faculty satisfactory evidence of good character, of being twenty-one years of age, of having read medicine with one or more reputable practitioners for three years, and of attendance on two courses of medical lectures in a legal medical college, the last of which shall have been in this college."

**FEES:** Matriculation, \$5; laboratory, \$5; demonstrator, \$5; lectures, \$45; graduation, \$25.

## IOWA.

Population, 1 624 615. Number of physicians, 3035. Number of inhabitants to each physician, 535.

An act, passed in 1882, granting additional powers to cities, provides that cities organized under the general incorporation laws of the State, in addition to the powers already granted them, shall have power: To regulate, license, and tax itinerant doctors, physicians and surgeons.

Section 3643 of the General Statutes prohibits a doctor from giving, in his testimony before a court, any confidential communication properly entrusted to him in his professional capacity, and necessary and proper to enable him to discharge the functions of his office according to the usual course of practice.

### COLLEGE OF PHYSICIANS AND SURGEONS,

(Formerly Medical Department University of Iowa.)

Keokuk, Iowa. (Pop., 12 117.)

Organized in 1850. The first class was graduated in 1851. Classes were graduated each subsequent year.—Faculty embraces six professors, two lecturers, and one "taxidermist and curator of museum."

**COURSE OF INSTRUCTION:** One course of lectures of twenty weeks' duration, annually; three years' graded course recommended, but not required. Clinics given at the college infirmary; practical anatomy and practical chemistry.—Lectures embrace institutes and practice of surgery, chemistry, toxicology, materia medica, institutes and practice of medicine, obstetrics, diseases of women, anatomy, pathology, physiology, therapeutics, ophthalmology, otology, medical jurisprudence, metric system.

**REQUIREMENTS:** For admission: "A certificate of graduation from a literary college, academy, high school, or first-class teacher's certificate, or a matriculation examination in the branches of a good English education."—For graduation: (1) twenty-one years of age; (2) good moral character; (3) two full courses of lectures; (4) three years' study; (5) no thesis required; (6) satisfactory examination, either oral or written, at the discretion of the faculty, in anatomy, physiology and pathology, chemistry, materia medica, therapeutics, practice of medicine and surgery.

**FEES:** Matriculation, \$5; demonstrator, \$5; lectures, \$20; graduation, \$30.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1879-80	266	117	66.6
1881-82	273	126	46 +
1882-83	130	54	41.5

Average percent of graduates to matriculates for three years, *forty-four*.

Number of Illinois students during the first year, 30.

Number of graduates in Illinois, 275.

## MEDICAL DEPARTMENT OF THE STATE UNIVERSITY OF IOWA.

Iowa City, Ia. (Pop., 7123.)

Organized in 1870. The first class graduated in 1871. Classes have graduated each subsequent year.—The faculty embraces eight professors, one assistant, one lecturer and one prosector.

**COURSE OF INSTRUCTION:** One course of twenty weeks' duration annually; graded course recommended but not required. Instruction is given by lectures, recitations, clinics, practical work in laboratories, dissections, and daily oral examinations, a record of which is recorded for future reference. All students in the advanced classes of both courses will receive special practical instruction in physical diagnosis, mechanical obstetrics, application of bandages, splints, and surgical dressings.—Lectures embrace anatomy, physiology, microscopic anatomy, chemistry, toxicology, materia medica, practice of medicine, surgery, obstetrics, gynecology, ophthalmology, otology, medical jurisprudence.

**REQUIREMENTS:** For admission—"All candidates for admission to the course of medical lectures must give evidence of a good English education. If the applicant is a graduate of a literary or scientific college, or presents the certificate of having passed the entrance examination of such an institution, or the certificate of graduation from a high school or academy, it will be accepted in lieu of an examination. In any other case, the candidate must pass an examination before a committee of the faculty, as follows: A written composition, not to exceed a page of foolscap, on a given subject, which will be the test of orthography, grammar, etc.; an examination in common arithmetic, history of the United States, in geography and elementary physics, or natural philosophy. Students from other schools not requiring preliminary examinations must present credentials or be examined for admission."—For graduation: (1) twenty-one years of age; (2) unexceptionable moral character; (3) three years' study; (4) two courses of lectures; (5) satisfactory examination in all the branches taught. In cases where the three-term course is adopted, a certificate of time of study is not an absolute requirement.

**FEES:** Matriculation, \$5; lectures, \$20; demonstrator, \$10; laboratory, \$5; graduation, \$25.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates:

Session.	Matriculates.	Graduates.	Percent.
1877-78	82	19	23+
1878-79	92	15	16+
1879-80	126	22	17+
1880-81	149	35	23+
1881-82	151	46	30+
1882-83	162	35	21+

Average percent. of graduates to matriculates during the past six years, *twenty-two*.

Number of Illinois students during the past year, 9.

Number of graduates in Illinois, 31.

**REMARKS:** Thirty-seven per cent. of the matriculates pursue the three years' graded course, an increase over the preceding year of seven per cent. Hygiene is taught by the chairs of practice and physiology.

## HOMEOPATHIC MEDICAL DEPARTMENT OF THE STATE UNIVERSITY OF IOWA.

Iowa City, Ia.

Organized 1877.—Faculty embraces two professors, five lecturers, and an assistant to the chair of materia medica. The teaching of this department is supplementary, the peculiar views of the school only being taught. The lectures on subjects common to both schools are delivered by the professors in the regular department.

**COURSE OF INSTRUCTION:** One course of twenty weeks' duration annually.—Lectures embrace theory and practice, materia medica, diseases of women and children, and obstetrical and surgical therapeutics, dermatology, pharmacy, physical diagnosis, minor surgery, dentistry, anatomy, physiology, obstetrics, surgery, chemistry and medical jurisprudence.

**REQUIREMENTS:** For admission, no requirement is printed in the regular annual announcement, but the dean writes that, since the announcement was issued, the board of regents have adopted the preliminary requirements given in the synopsis of the regular department (*vide supra*), and that they "are now in full force in both departments." For graduation: (1) twenty-one years of age; (2) good moral character; (3) three years' study; (4) two full courses of lectures; (5) "must have been engaged in the study of practical anatomy and practical chemistry;" (6) satisfactory examination in all the branches taught in the department. "The final examinations will be conducted in writing, by the faculty of the department, subject to approval or rejection by a board of examiners, selected for that purpose from the homeopathic physicians of Iowa. The *ad eundem* degree in this department may be conferred under the following circumstances: The candidate must be in possession of an accredited diploma, and must present letters from two respectable

physicians in regard to his moral character and professional standing. An attendance upon lectures, from time to time during the session, and a satisfactory examination must be passed on all subjects taught in the department."

FEES: Matriculation, \$5; lectures, \$20; demonstrator, \$10; laboratory course, \$5; graduation, \$25.

STUDENTS: Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	18	1	5.5
1878-79	32	3	9.3
1879-80	47	9	19+
1880-81	60	16	26.6
1881-82	46	15	32.6
1882-83	44	12	27.2

Average percent. of graduates to matriculates during the past six years, *twenty-three*.

Number of graduates in Illinois, 3.

REMARKS: Twenty-seven per cent. of the students pursue the three years' graded course, a decrease over the preceding year of one percent.

#### IOWA MEDICAL COLLEGE—*Eclectic*.

##### *Medical Department of Drake University.*

Des Moines, Ia. (Pop. 22 408.)

Organized in 1881 as the Iowa Eclectic Medical College, Medical Department of Drake University; assumed its present name in 1883. The first class graduated in 1882.—The faculty embraces eight professors and five lecturers.

COURSE OF INSTRUCTION: Two sessions of twenty weeks each held each year.—Lectures embrace chemistry, toxicology, physiology, descriptive and surgical anatomy, obstetrics, materia medica, therapeutics, principles and practice of medicine, gynecology, principles and practice of surgery, diseases of the thorax, alimentary tract and children, dental pathology, medical jurisprudence.

REQUIREMENTS: For admission, none.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) must have read medicine three years and attended two full courses of lectures, not in the same year; (4) dissection for two terms; (5) satisfactory examination in anatomy, chemistry, materia medica and therapeutics, obstetrics, physiology, practice of medicine and surgery, either written or oral, at discretion of the faculty.

FEES: Matriculation (paid but once), \$5; lectures, \$25; demonstrator, \$5; graduation, \$25.

STUDENTS: Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
Jan. to June, 1882,	25	7	22 +
Sept., 1882, to June, 1883,	19	—	—
Jan. to June, 1883,	19	8	42 +

Total number of individual students who have attended lectures at this school, 39. Total number graduated, 15. Percent. of graduates to matriculates, *thirty-eight*.

REMARKS: E. H. CARTER, M. D., Dean, writes:

"Our announcement just published" (issued before the receipt of documents informing him of the minimum requirements of this BOARD) "does not fill your requirements. We will gladly put ourselves in harmony with the present custom of the best schools in this country. We have sent out a few announcements like the one I sent you. Will send no more, however, but will have new ones printed."

#### COLLEGE OF PHYSICIANS AND SURGEONS OF IOWA.

Des Moines, Ia.

Organized in 1882. The first class graduated in 1883.—The faculty embraces fifteen professors.

COURSE OF INSTRUCTION: One course of lectures of twenty-two weeks' duration annually; three years' graded course recommended but not required.—Lectures embrace principles and practice of medicine, principles and practice of surgery, clinical surgery, obstetrics, gynecology, diseases of children, anatomy, physiology, materia medica, therapeutics, chemistry, toxicology, pathology, histology, microscopy, ophthalmology, otology, laryngology, medical jurisprudence, mental and nervous diseases, dermatology, orthopedic surgery, hygiene, genito-urinary diseases.



**REQUIREMENTS:** For admission, none.—For graduation: (1) twenty-one years; (2) good moral character; (3) three years' study; (4) two full courses of lectures; (5) satisfactory examination in the several branches taught in the college, "and present satisfactory evidence of a preliminary examination in the higher English branches as taught in the high school, academy or college, or be subject to an examination in the same, at the discretion of the faculty."

**FEES:** Matriculation, \$5; lectures, \$40; demonstrator, \$5; graduation, \$25; laboratory, \$5.

**STUDENTS:** Session of 1882-83—matriculates, 9; graduates, 3. Percent. of graduates to matriculates, *thirty-three*.

## KANSAS.

Population, 996 096. Number of physicians, 1964. Number of inhabitants to each physician, 507.

In 1879, an act to regulate the practice of medicine in Kansas was passed, which authorized the Kansas Medical Society, the Eclectic Medical Society of the State of Kansas, and the Homeopathic State Medical Society, each, to appoint a board of examiners. These boards were empowered to grant certificates to those presenting diplomas duly authenticated, as well as to those passing an examination by either one of the boards; and such certificates were conclusive as to the right of the recipients to practice in the State.

In other respects, also, the act resembled the California act, the text of which is given elsewhere.

Dr. D. W. STORMONT, of Topeka, president of one of the Boards of Examiners, writes that this act was declared unconstitutional, on the ground that the medical examiners, being State officers, should have been appointed by the Governor, instead of by the State medical societies. No examinations have been made since 1880. Complaint was also made, that the law was defective in operation, in that persons who failed to pass the examination of one board were not debarred from appearing before either of the others; and that in this way incompetent individuals became legally qualified.

### MEDICAL DEPARTMENT, UNIVERSITY OF KANSAS.

Lawrence, Kas. (Pop., 8571.)

Organized in 1880.

**COURSE OF INSTRUCTION:** Two terms of twenty weeks' duration, annually. First term—chemistry lectures and recitations daily, for twenty weeks; laboratory practice for twenty weeks; physiology lectures daily, for ten weeks; comparative anatomy, dissections, etc., etc., ten weeks. Second term—botany recitations and laboratory practice daily, for twenty weeks; chemistry, physiology and pathology recitations and laboratory practice, for fourteen weeks; toxicology, six weeks; materia medica recitations and practice daily, for twenty weeks.

**REQUIREMENTS:** A full collegiate course is recommended for all professional students. Any student admitted to the special course in medicine must be prepared at least for freshman class in all English studies.

Number of students attending the last session, seven.

**REMARKS:** This is a preparatory medical course, and is claimed to be "accepted by all the leading colleges of the West as the first of a three-years course, and students passing examinations in these classes will be admitted to the second year in those colleges on the certificate of the faculty of this institution."

## KENTUCKY.

Population, 1 648 690. Number of physicians, 2985. Number of inhabitants to each physician, 551.

**AN ACT to Protect Citizens of this Commonwealth from Empiricism.**

Whereas, the people are liable to be imposed upon by charlatans and incompetent physicians and surgeons; and whereas, it is of the highest importance that none but persons with competent qualifications should be allowed to practice a profession to whose skill and ability the life of the individual is intrusted; therefore,

Be it enacted by the General Assembly of the Commonwealth of Kentucky:

**SECTION 1.** That it shall be unlawful for any person, for reward or compensation, within the limits of this State, to practice medicine in any of its departments, or to prescribe, or attempt to prescribe, medicine for any sick person, or perform, or attempt to perform, any surgical operation upon any person within said limits, who has not gradua-

ted at some chartered school of medicine in this or some foreign country, or who cannot produce a certificate of qualification from some one of the boards of examiners provided for in this act, and is not a person of good moral character.

§ 2. Any person who has been regularly and honorably engaged in the practice of medicine, in any of its departments, for ten years, shall be deemed to have complied with the provisions of this act. Any person having been so engaged for five years shall be allowed one year in which to comply with said provisions.

§ 3. The Governor shall, within sixty days from the passage of this act, appoint five citizens in each and every judicial district in this State; said citizens shall be practicing physicians of acknowledged learning and ability, and regular graduates of some chartered medical college, who shall constitute and be styled, "The Board of Medical Examiners," for said district; three of whom shall constitute a quorum for the transaction of business. Their term of office shall be four (4) years, beginning the first day of April, 1874; and it shall be the duty of the Governor, each four years thereafter, and prior to the first day of April, to appoint their successors, who shall have the qualifications herein required.

§ 4. It shall be the duty of each of said boards to meet and hold annual sessions in their respective districts, at some central, convenient place, easy of access, to be by them selected, commencing on the first Monday in June of each year, for the purpose of examining all applicants who desire to practice medicine, in any of its departments. The examination shall be conducted in such manner and to such extent as the examiners may deem most conducive to the interests and wants of the people and the advancement of learning in the medical profession, and to embrace the following branches of medical science, viz: Chemistry, anatomy, physiology, obstetrics, surgery, and so much of practical medicine as relates to the nomenclature, history and symptoms of disease. The several boards may hold extra sessions, if they deem it necessary, at any time and place in their respective districts they may think proper.

§ 5. The examination shall require all applicants to produce satisfactory evidence of good moral character, and to pay an examination fee of not more than twenty dollars. The sessions of the several boards shall continue long enough to give all who desire it an opportunity to undergo a fair and impartial examination.

§ 6. The examiners shall grant all applicants—who shall be found upon examination to possess a fair, practical knowledge of the branches named in section four of this act—a certificate of qualification, signed by at least three members of said board, which shall entitle the holder thereof, for the time specified, to practice any or all of the branches named in said certificate, anywhere in said district or adjoining district.

§ 7. The members of the several boards shall receive as compensation for their services, all of the fees paid by applicants for examination before said board. Certificates shall designate the time and the branches the holder thereof shall be entitled to practice, and shall not be granted for a longer period than five years, nor a less period than one year.

§ 8. Any person living in this State, or any person coming into this State, who shall practice medicine or attempt to practice medicine, in any of its departments, or who shall perform or attempt to perform any surgical operation, for or upon any person within the limits of this State, for reward or compensation, in violation of the provisions of this act, shall, upon conviction thereof, be fined fifty dollars, and upon each and every subsequent conviction be fined one hundred dollars and imprisoned thirty days, or either, or both, in the discretion of the jury: and in no case where the provision of this act has been violated, shall the person so violating be entitled to receive compensation for services rendered.

§ 9. *Provided*, that nothing herein shall be so construed as to apply to persons practicing dentistry.

§ 10. This act shall be in force from its passage.

Approved February 23, 1874.

Drs. PINCKNEY THOMPSON and J. W. HOLLAND, of the Kentucky State Board of Health, write that, in all but a few counties or districts, this law is a dead letter.

#### MEDICAL DEPARTMENT OF TRANSYLVANIA UNIVERSITY.

Lexington, Ky. (Pop., 16 656.)

Organized in 1817. Lectures were delivered at Lexington until 1859, when the institution became extinct.—From 1850 to 1859 lectures were delivered during the summer only, the winter sessions being intermitted to establish the Kentucky School of Medicine, at Louisville. Number of graduates in Illinois, 17.

#### MEDICAL DEPARTMENT OF THE UNIVERSITY OF LOUISVILLE.

Louisville, Ky. (Pop., 123 758.)

Organized in 1837. No lectures were delivered from June, 1862, to June, 1863, and no class graduated in 1863, because of the rebellion.—The faculty embraces eight professors, two lecturers and five demonstrators.

**COURSE OF INSTRUCTION:** One regular course of twenty-three weeks' duration, one spring course of twelve weeks' duration, and one post-graduate (practitioners') course of six weeks' duration, annually. Clinics given at dispensary and hospitals. Frequent quizzes are conducted by the faculty—Lectures embrace anatomy, ophthalmology, otology, principles and practice of medicine, and clinical medicine, physiology, diseases of the chest, state medicine and sanitary science, pathology, nervous diseases, surgery—clinical and operative, surgical pathology, obstetrics, gynecology, materia medica, therapeutics, chemistry.

**REQUIREMENTS:** For admission, none.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) three years' study; (4) two complete courses of lectures; (5) one course of practical anatomy; (6) one course of clinical instruction; (7) examination on all the branches taught in the college.

**FEES:** Matriculation, \$5; lectures, \$75; demonstrator, \$10; hospital, \$5; graduation, \$30.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	200	69	34+
1878-79	210	84	40
1879-80	244	95	38+
1880-81	213	100	47+
1881-82	181	96	53+
1882-83	194	68	35+

Average percentage of graduates to matriculates during the past six years, *forty-one*.

Number of Illinois students during the last session, 3.

Number of graduates in Illinois, 94.

**REMARKS:** The course has been lengthened three weeks since the last session.

#### KENTUCKY SCHOOL OF MEDICINE.

Louisville, Ky.

Organized in 1856. The first class graduated in 1857. Classes have graduated each subsequent year.—The faculty embraces nine professors, one lecturer and one demonstrator.

**COURSE OF INSTRUCTION:** One course of lectures of twenty weeks' duration annually, commencing February 10, after the close of lectures in the winter schools. Quizzes are held each day by the members of the faculty. Clinics at hospital and college. Three years' graded course recommended, but not required.—Lectures embrace anatomy, physiology, chemistry, materia medica, surgical pathology, microscopy, therapeutics, obstetrics, diseases of women, surgery, clinical surgery, practice of medicine, clinical medicine, nervous diseases, ophthalmology, otology, laryngology, venereal diseases, and minor surgery.

**REQUIREMENTS:** For admission—"Applicants for matriculation must give evidence that they possess a good English education."—For graduation: (1) twenty-one years of age; (2) good moral character; (3) two full courses of lectures, the interval between the beginning of the first and the close of the second course must be at least fifteen months; (4) "dissection of the several regions of the body;" (5) one course of hospital clinics; (6) examination on all branches taught in the college. "If, after examination for the degree, he be found to have received three negative votes, he shall be entitled to another examination. Should he decline this, he may withdraw, and will not be considered as rejected. The degree will not be conferred upon any candidate who is often absent from the regular lectures of the college, or who absents himself from the public commencement without special permission of the faculty."

**FEES:** Matriculation, \$5; demonstrator, \$10; hospital, \$5; lectures, \$75; graduation, \$30.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1879	136	43	31+
1880	107	43	40+
1882	132	55	41+
1883	158	51	32+

Average percent. of graduates to matriculates during four years, *thirty-six*.

Number of Illinois students attending the last session, 10.

Number of graduates in Illinois, 47.

#### LOUISVILLE MEDICAL COLLEGE.

Louisville, Ky.

Organized in 1869. The first class was graduated in 1870. Classes have been graduated each subsequent year.—The faculty embraces eight professors and three demonstrators.

**COURSE OF INSTRUCTION:** One preliminary course of four weeks' duration, and a regular session of nineteen weeks' duration, annually. Daily quizzes held by members of the faculty. "The plan of instruction includes lectures, clinics, quizzes, and practical demonstrations."—Lectures embrace theory and practice of medicine, anatomy, materia medica, obstetrics, gynecology, chemistry, physiology, histology, surgery, therapeutics, diseases of children.

**REQUIREMENTS:** For admission, none.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) three years' study; (4) two full courses of lectures (not in the same twelvemonth); (5) one course of dissection; (6) one course of hospital clinics; (7) satisfactory examination.

**FEES:** Matriculation, \$5; demonstrator, \$10; lectures, \$75; hospital, \$5; graduating, \$30.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	149	70	46+
1878-79	136	61	44+
1879-80	129	56	43+
1880-81	116	54	47+
1881-82	125	54	43+
1882-83	157	51	32+

Average percent. of graduates to matriculates during the past six years, *forty-three*.

Number of Illinois students during the past year, 1.

Number of graduates in Illinois, 60.

#### HOSPITAL COLLEGE OF MEDICINE.

(Medical Department, Central University.)

Louisville, Ky.

Organized in 1873. The first class was graduated in 1875. Classes have been graduated each subsequent year.—The faculty embraces eight professors and a demonstrator.

**COURSE OF INSTRUCTION:** One preliminary course of three weeks' duration, one regular (graduating) course of nineteen weeks' duration, and one practitioners' course are given annually. Daily quizzes are conducted by the faculty. Clinics are given at hospitals and dispensary.—Lectures embrace obstetrics, gynecology, physiology, hygiene, mental diseases, surgery, principles and practice of, and clinical medicine, descriptive, comparative and surgical anatomy, materia medica, therapeutics, diseases of children, ophthalmology, otology, microscopy, practical chemistry, practical physiology, minor surgery.

**REQUIREMENTS:** For admission, none.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) three years' study; (4) two complete courses of lectures; (5) practical anatomy for one session; (6) clinical instruction at hospital during one session; (7) examination on all branches taught in the college.

**FEES:** Matriculation, \$5; lectures, \$75; demonstrator, \$10; hospital, \$5; practical chemistry, \$5; graduation, \$30.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates:

Session.	Matriculates.	Graduates.	Percent.
1877-78	64	19	29+
1878-79	87	24	27+
1879-80	95	38	40
1880-81	77	31	40+
1881-82	75	36	48
1882-83	87	31	35+

Average percent. of graduates to matriculates during the past six years, *thirty-seven*.

Number of Illinois students attending the last session, 2.

Number of graduates in Illinois, 12.

**REMARKS:** The Dean writes: "In our announcement for 1884 will be the requirement of a good English education as a prerequisite for matriculation, which was inadvertently omitted in our last." The sessions are now held from January to June.

#### JEFFERSON SCHOOL OF MEDICINE.

Louisville, Ky.

Organized in 1882. This school graduated one class (in 1882), and then suspended operations.

Number of graduates in Illinois, 1.



## LOUISIANA.

Population, 939 916. Number of physicians, 1033. Number of inhabitants to each physician, 909.

### AN ACT Relative to the Practice of Medicine and Surgery.

Be it enacted by the General Assembly of the State of Louisiana:

SECTION 1. That no person shall be allowed to practice medicine or surgery, as a means of livelihood, in any of its departments, without first making affidavit before a duly qualified judge or justice of the peace, or clerk of the district court, or notary public, in the parish wherein he resides, of his having received the degree of doctor of medicine from a regularly incorporated medical institution of respectable standing in America or in Europe, and designating its name and locality, and the date of his diploma, such degree to be manifested by a diploma issued by such institution, and its respectable standing to be evidenced by the endorsement or certificate of the State Board of Health written on the face of said diploma and signed by the secretary; said affidavit shall also contain the full name of the person making the same, the date and place of his birth, and the names and places where he may have previously practiced medicine or surgery; and for every diploma certified or *vised* by the said Board of Health, a fee of fifty cents shall be paid by the applicant, and a record of diplomas certified shall be preserved by said State Board of Health, and copies thereof, certified by the secretary, shall be received in evidence by the courts of this State: *Provided*, that the said State Board of Health shall be required to certify the diploma of any medical institution of credit and respectability, without regard to its system of therapeutics, and whether the same be regular, homœopathic or eclectic.

§ 2. That the affidavit required in the first section of this act shall be recorded in the office of the clerk of the district court of the parish, who shall make such record in a book to be kept for that purpose only, and also certify such recordation by an endorsement on the original affidavit, which the affiant shall transmit to the State Board of Health; the officer before whom the affidavit is made, unless he be a judge, shall be entitled to a fee of fifty cents; and the officer recording the same, to a fee of one dollar; the clerk of the court shall charge no fee for the preservation of the original affidavits, but a copy thereof, duly certified by the clerk of the court, shall be admissible in evidence, and a fee of fifty cents shall be paid for said copy.

§ 3. That the provisions of this act shall not apply to female practitioners of midwifery as such, nor to persons who have been practicing medicine or surgery in this State without diplomas for the period of five years prior to the passage of this act, nor to persons who have been practicing medicine or surgery in this State with diplomas emanating from a regularly incorporated medical institution of reputable standing in America or in Europe, for ten years prior to the passage of this act: *Provided*, that such practitioners of medicine or surgery shall make an affidavit before any judge, justice of the peace, notary public or clerk of court of the parish wherein he resides, setting forth the following facts: The full name of the person making the affidavit, the date and place of his birth, the date of his diploma, if he have any, and the name and locality of the institution by which it was made, the date and place where he began the practice of medicine in Louisiana, and the names of the places where he may have previously practiced medicine or surgery; such affidavit shall be transmitted or delivered to the State Board of Health, and shall entitle the affiant to be placed on the list of registered physicians or surgeons, the publication of which is hereinafter provided for, and the officer before whom such affidavit is made shall be entitled to a fee of fifty cents; and the said State Board of Health shall preserve said affidavits, and a copy thereof, signed by the secretary, shall be received as evidence in the courts of this State, and for such copy a fee of fifty cents shall be paid. And any person who shall, in the affidavit required by this section, wilfully make any false statement, shall be deemed guilty of the crime of perjury, and punished in the manner provided by existing laws for the punishment of the crime of perjury.

§ 4. That a copy of the affidavit recorded by the clerk of the district court, certified by him, shall be *prima facie* evidence that the person making the affidavit is a duly registered physician or surgeon, and a certified copy of the original affidavit filed with the State Board of Health, or a certificate emanating from said State Board of Health, that the name of the person mentioned in the certificate is on the list of registered physicians and surgeons, shall be conclusive evidence of the fact.

§ 5. That it shall be the duty of the State Board of Health to publish annually, in the official journal of the State, and if there be no such journal, in one of the daily newspapers published in the city of New Orleans, a list of all registered physicians and surgeons in the State, and their places of residence, and such published list shall be received in evidence by the courts of this State as proof that the physicians and surgeons therein named are duly registered, as required by law; and the said State Board of Health is hereby required to strike from said list the names of such persons who may have been convicted of any infamous crimes by any court of this State or of the United States, or of any State of the United States, whether such conviction occur prior or posterior to registration; and it is also empowered to strike from said list the names of persons who may die after registration. If any person is improperly stricken from said list, he may be restored by writ of *mandamus*, issued by the judicial tribunals of the State, sitting in chambers, competent to investigate such cases.

§ 6. That any practitioner of medicine or surgery, failing to comply with the requirements of this act, shall not be exempt from jury or militia duty, nor be permitted to collect any fees or charges for services rendered, nor be allowed to testify as a medical or surgical expert in legal or State medicine in any court of this State, nor to execute any certificate as a surgeon or physician, nor to hold any medical office, nor to be recognized by the State or any parish or municipal corporation as a physician or surgeon; nor shall he be entitled to enjoy any of the privileges, rights or exemptions granted to physicians or surgeons by the laws of this State; and moreover, he shall forfeit and be liable to a penalty of one hundred dollars for each and every violation of this act, and for each and every

time he so violates it, said sum or sums to be recovered in a civil action to be brought before any court of competent jurisdiction, in the name and for the benefit of the Charity Hospital at New Orleans; and he shall, in addition thereto, be subject to criminal prosecution and be punished in the manner prescribed by law for violations of this act.

§ 7. That this act shall not apply to practitioners of medicine or surgery residing and practicing in other States, who may be summoned in special instances to attend patients in the State of Louisiana by any registered physician.

§ 8. That this act shall take effect on and after the first day of January, 1883.

Approved June 26, 1882.

S. S. HERRICK, M.D., Secretary of the Louisiana State Board of Health, in his preface to the Register of Physicians, says:

Shortly after undertaking the registration of physicians, it became evident that a very grave responsibility was involved in this work, especially in deciding what medical institutions should be regarded as being of "respectable standing," within the proper meaning of the law.

Experience soon taught us the utility of a specific regulation, to supplement the classification furnished by the ILLINOIS STATE BOARD OF HEALTH; for diplomas were found, in two instances, emanating from schools rated as respectable, which were granted after attendance upon only one course of lectures, some years of practice without a diploma having been accepted as equivalent to a course of lectures. This custom was common enough among even respectable colleges, up to a recent period, but has been disavowed by all reputable institutions, and this Board has determined to give it no countenance.

Holders of diplomas from every school known to have conferred a degree after only one course of lectures are required to incorporate in their affidavits the declaration that they have attended not less than two full courses and passed a final examination.

Experienced has disclosed several defects [in the law], some of them of a serious nature, which are here noted.

1. The law provides for no examination of candidates for registration. A number of meritorious men are consequently obliged to be classed with those who can make no just claim to medical knowledge, but who are privileged to register as practitioners of more than five years' standing. Some of these gentlemen have failed to obtain diplomas, after pursuing their medical studies nearly or quite the prescribed period, and could, if allowed opportunity and time for preparation, pass a creditable examination. This would give them a footing at once respectable and satisfactory to themselves; whereas, now, several individuals who rank well in their own communities, both socially and as medical practitioners, feel wronged and humiliated by the operation of this act.

2. The act does not recognize the degree of M. B., nor the qualifications granted by the Royal Colleges of Physicians and of Surgeons, and the Society of Apothecaries, in the United Kingdom of Great Britain and Ireland. It is presumed that it was not the intention of our General Assembly to debar them from the privilege of a respectable registration in this State. Accordingly the law has received an interpretation in their favor; and a similar construction has been put upon it with reference to those who have received secondary diplomas in France, which entitle their holders to practice as *Officiers de santé*. It is hoped that the legislature may give express sanction to this liberal construction by suitable amendment to the act.

3. The law specifies no mode of registration for those whose diplomas are disapproved, and a possible construction would be to deny them registration altogether. Applicants for registration are required to make affidavits either as holders of approved diplomas, or as practitioners of more than five years, prior to the passage of the act, without diplomas. Those having disapproved diplomas strictly do not belong to either class; but it has been presumed that the legislature did not intend to cut them off altogether, and accordingly they are allowed to register as those having no diplomas. This defect might be remedied by admitting them to an examination, or granting them the same privilege as those without diplomas.

4. No provision is made in the law for loss or destruction of a diploma. An examination, if authorized by law, would place an individual of this class on an equitable footing.

5. The term "practitioner of medicine and surgery," is not defined in the act, and this omission has been found a serious obstacle to successful prosecution of those who have failed or neglected to register. On the other hand, it is evident that fictitious claims to registration might be set up by those pretending to have practiced for periods of years, so as to claim the privileges of section 3.

The difficulty of framing a law so perfect as to satisfy all concerned has already been hinted at. In fact, complaints are freely made of this act, and, singularly made for the most part by those who might be supposed to derive the greatest benefit from its strict enforcement. Indeed, there is good reason to believe that many are neglecting to register from simple captiousness. Some practitioners of less than ten years' standing think it a discrimination against themselves, because they are put to more trouble and expense to register than men without diplomas who practiced more than five years in the State prior to the passage of the act. They do not stop to consider that all those having approved diplomas, no matter how recent, can register, while those who practiced in Louisiana less than the five years prior to the passage of the act cannot register at all, unless they obtain diplomas.

Another complaint is, that a wide door to registration is left open to many ignorant men who claim it under the five-year clause; and fault is found with the law because it is not immediately operative in ridding the State of unqualified practitioners. It should be remembered that great and useful reforms cannot be created full-grown and mature, but must have a beginning and a gradual growth from moderate proportions. In a few

years, with faithful execution of this law, amended of its defects, our State will be practically rid of unqualified practitioners of medicine, by the dying out of those who have registered under section 3, without diplomas. Finally, it should not be forgotten that *the real object of the law is the protection of the public from unqualified practitioners of medicine, rather than the creation of a privileged class of individuals.* Physicians have no moral nor legal right to claim the latter, though it may incidentally follow; while it is certainly their duty, as law-abiding citizens, to put themselves to the slight trouble and expense required to carry out effectually the provisions of the law. State and city license taxes have been required by law here for many years.

#### MEDICAL DEPARTMENT OF THE UNIVERSITY OF LOUISIANA.

New Orleans, La. (Pop. 215 060.)

Organized in 1831, as the Medical College of Louisiana. Transferred to its present connection in 1847. The war caused suspension during the years 1863, '64 and '65; reorganized in 1865.—The faculty embraces seven professors and a demonstrator.

**COURSE OF INSTRUCTION:** One annual course of nineteen weeks' duration, three years graded course recommended but not required; daily rounds of hospitals made by students with professors and chiefs of clinics.—Lectures embrace general and clinical surgery, theory and practice of medicine, and clinical medicine, physiology, pathological anatomy, chemistry, anatomy, obstetrics, diseases of women and children, materia medica, therapeutics, hygiene.

**REQUIREMENTS:** For admission, none.—For graduation: (1) good moral character; (2) twenty-one years of age; (3) three years' study; (4) two complete courses of lectures; (5) two complete courses of dissection; (6) thesis; (7) pass satisfactory examination.

**FEES:** Matriculation, \$5; lectures, \$140; demonstrator, \$10; graduation, \$30.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1880-81	*204	41	20
1881-82	*220	†56	25.4
1882-83	*212	73	34.4

Average percent. of graduates to matriculates during the past three years, *twenty-six*.

Number of Illinois students attending the last session, 1.

Number of graduates in Illinois, 3.

#### NEW ORLEANS SCHOOL OF MEDICINE.

New Orleans, La.

Organized in 1856. Extinct since April, 1870. Number of graduates in Illinois, 3.

#### CHARITY HOSPITAL MEDICAL COLLEGE.

New Orleans, La.

Organized in 1873. Extinct since 1877. Number of graduates in Illinois, 2.

#### MEDICAL DEPARTMENT NEW ORLEANS UNIVERSITY.

#### MEDICAL DEPARTMENT STRAIGHT UNIVERSITY.

New Orleans, La.

Both are for colored students, and open to males and females. I do not know that any medical diplomas have actually been issued from either. If so, we could not recognize them here, for they certainly have not given such courses of instruction as to qualify men or women to practice medicine. (*Official letter, Louisiana State Board of Health.*)

\*Includes pharmacy students. †Includes pharmacy graduates.



## MAINE.

Population, 648 936. Number of physicians, 969. Number of inhabitants to each physician, 670.

AN effort was made at the last session of the Legislature to pass a bill, of which the following were the provisions: Graduates of institutions legally qualified to confer medical degrees and all who had practiced without a diploma for thirteen or more years continuously, should be allowed to register. All persons practicing medicine without having been registered should be deemed guilty of a misdemeanor, and on conviction thereof be punished by a fine of from one to five hundred dollars, or by imprisonment of from three to twelve months, or both.

This bill was favored by the better elements of all sects; but quacks, botanics, magnetics and Druids, (the latter a class peculiar to this State), combined, and defeated the bill by a small majority in the House. It had passed the Senate quite unanimously.

M. C. WEDGWOOD, M. D., of Lewiston, writes: We feel the need of such a law in this State, and shall make another attempt at the next meeting of the Legislature. The profession here is united in the opinion of requiring the medical student to attain to a higher education.

### MEDICAL SCHOOL OF MAINE, AT BOWDOIN COLLEGE.

Brunswick, Me. (Pop. 5384.)

Organized in 1820. The first class was graduated in 1820. Classes have been graduated each subsequent year.—Faculty embraces eight professors and two demonstrators.

COURSE OF INSTRUCTION: One annual course of lectures of *sixteen* weeks' duration commencing in February. Clinics are given once a week. Daily examinations are made by the faculty.—Lectures embrace pathology, practice of medicine, obstetrics, diseases of women and children, medical jurisprudence, anatomy, chemistry, physiology, surgery, clinical surgery, *materia medica*, therapeutics.

REQUIREMENTS: For admission, (a) diploma from college, high school or normal school; (b) tickets showing passage of entrance examination to any recognized college; or (c) examination necessary to prove good English education.—For graduation, (1) twenty-one years of age; (2) good moral character; (3) two full courses of lectures; (4) satisfactory written and oral examination on subjects of the lectures; (5) thesis; (6) dissection of two "parts."

FEES: Matriculation, \$5; lectures, \$78; graduation, \$25; laboratory, \$10.

STUDENTS: Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percentage.
1878	94	25	26.6
1879	99	31	31.3
1880	105	22	21—
1881	115	30	26 +
1882	104	28	27—
1883	94	28	29.7

Average percent. of graduates to matriculates during the past six years, *twenty-six*.

Number of graduates in Illinois, 11.

### PORTLAND SCHOOL FOR MEDICAL INSTRUCTION.

Portland, Me. (Pop. 33 810.)

Organized in 1855.—The faculty embraces ten professors and one demonstrator. Two terms of sixteen weeks each, annually.

"The aim of the school is to afford to medical students greater facilities for obtaining a higher grade of professional education than can usually be given under the direction of a single preceptor."

The course comprises systematic daily recitations, familiar lectures and demonstrations, clinical instruction and practical anatomy.

No diplomas are conferred.

Tuition, \$60.

### ECLECTIC MEDICAL COLLEGE OF MAINE.

Lewiston, Me. (Pop. 19 083.)

Organized in 1881. The first class was graduated in 1882.—The faculty embraces five professors, three lecturers, one instructor and one demonstrator.

COURSE OF INSTRUCTION: One regular course of twenty weeks' duration, annually. "Medical, surgical and dental clinics are held two or three times each week." Examinations are made daily and weekly.—Lectures embrace obstetrics, gynecology, principles



and practice of surgery, general and descriptive anatomy, physiology, chemistry, materia medica, therapeutics, theory and practice of medicine, microscopy, operative dentistry, medical jurisprudence, and urinalogy.

**REQUIREMENTS:** For admission: "Must give evidence of possessing a good moral character, and of having had the advantages of at least a good common school education. A knowledge of the rudiments of the Latin language is also very desirable. The certificates of the medical preceptor will be taken as evidence of the above qualifications." For graduation: (1) twenty-one years of age; (2) good moral character; (3) two full courses of lectures; (4) three years' study; (5) thesis; (6) satisfactory examination in the seven principal branches.

**FEES:** Matriculation, \$5; lectures, \$75; demonstrator, \$10; graduation, \$25.

**STUDENTS:** Number of matriculates and of graduates at each session reported and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1881-82	23	3	13
1882-83	38	14	37

Average percentage of graduates to matriculates during the past two years, *twenty-five*.

## THE PENOBSCOT VALLEY GORSEDDH OF BARDS AND STATE OF MAINE BRANCH OF THE DRUIDIC UNIVERSITY OF AMERICA.

Lewiston, Me.

Organized in 1880.

Dr. SAMUEL YORK, "3d Bard, or Dean of the University," writes: "The purpose of the Druidic University is to promote literature, science, art, medicine, philosophy and other branches of knowledge and industry. We have teachers in all departments, under the direction of the chair bard. A charter was granted by the Legislature in 1880, and the institution was founded in the State of Maine. We graduate students according to the seven years' curriculum of the bards. No charge for diplomas. Terms for one year, sixty dollars; for one term of three months, twenty-five dollars. The university was opened for the year at the summer solstice, June 21st, 1883."

## MARYLAND.

Population, 934 943. Number of physicians, 2845. Number of inhabitants to each physician, 329.

GEO. H. ROHE, M. D., writes:

The following facts concerning the regulation of medical practice in the State of Maryland are furnished in obedience to your request.

In the beginning of the present century, the medical and chirurgical faculty of Maryland, by act of the general assembly, (passed January 20, 1799), was incorporated, and authorized to elect by ballot a board of "twelve persons of the greatest medical and chirurgical abilities in the State, who shall be styled the Medical Board of Examiners for the State of Maryland." The duty of this board was "to grant licenses to such medical and chirurgical gentlemen as they, either upon a full examination, or upon the production of diplomas from some respectable college, may judge adequate to commence the practice of the medical and chirurgical arts, each person so obtaining a certificate to pay a sum not exceeding ten dollars, to be fixed on, or ascertained by, the faculty."

Section V of this act provided "That after the appointment of the aforesaid medical board, no person, not already a practitioner of medicine or surgery, shall be allowed to practice in either of the said branches, and receive payment for his services, without having first obtained a license certified as by this law directed, under the penalty of fifty dollars for each offence, to be recovered in the county court where he may reside, by bill of presentment and indictment, one half for the use of the faculty and the other for that of the informer.

This sixth section of the charter of the medical and chirurgical faculty was abrogated by an act of the general assembly passed sometime between 1840 and 1850, in favor of the Thompsonians, who then had a large following in the State. This opened the door to quackery of all sorts, and until 1867, there was no regulative act in existence.

In the latter year an act was passed constituting a board of medical examiners appointed by the governor, whose duty it was to register all practitioners holding recognized diplomas, examine and grant licenses to such as applied, and grant certificates to practice, to such as had been in continuous practice in the State for ten years previous to the passage of the act. The first prosecution under the act showed its insufficiency, and in the following year (1868) the law was repealed, and only one section, relating to abortion, was re-enacted.

This latter act (section 16 of article 72 of the revised code of 1878) is the only existing regulation on the practice of medicine in the State. It provides that any person who shall knowingly publish or furnish means for procuring abortion shall be punished by imprisonment in the penitentiary for not less than three years, or by a fine of not less than five hundred, nor more than one thousand, dollars, or both, at the discretion of the court.

In 1880, some attempts were made to pass a regulative act, but I believe it was not generally sustained by the profession, owing to serious defects in the measure proposed.

It is proposed to bring the matter up before the next session of the general assembly, if the medical and chirurgical faculty can be induced to lend the movement its support and encouragement.

In the city of Baltimore there is in force an ordinance for the registration of physicians and midwives; but as there is no other guide to the competency of the persons applying for registration than the statement of the parties themselves, the commissioner is obliged to register all who apply. The commissioner can of course refuse to register an applicant, but it would probably result in a suit at law against the city or the commissioner. Hence, the ordinance is not much of a safeguard against unqualified practitioners.

A State board of health is also in existence. It consists of seven members. The secretary of the board must be an "educated physician and experienced in sanitary science." He is a member of the board, being elected to the position by the other six members. The salary of the secretary (act of 1880) is \$1,800 per annum. \$1,200 are appropriated for expenses of the board.

Dr. C. W. CHANCELLOR, secretary of the State board of health, in his report to the governor (1882), says, under the head of

#### *Qualification and Registration of Physicians:*

It is very important, in the interest of the people, that there should be some efficient law to regulate the practice of medicine in the State. The facilities of becoming professional men, with the prefix of "M. D.," are so great that many persons are seduced into an attempt to become physicians, without the basis of primary education or any knowledge of the science of medicine and surgery. There are others again, who, having received a good primary education, are induced, from motives of economy or convenience, to purchase diplomas from bogus medical schools without having obtained any anatomical knowledge or clerical instruction. The great multiplication of medical schools in every section of the country, together with the proverbial facilities of becoming licensed practitioners, has so lowered the standard of professional excellence, and so manifestly degraded the medical character of the United States, that it is to be hoped that an enlightened public opinion will in this as in other States, take decided steps towards putting down such a vicious system. The statement made in the annual report of the attorney-general of Pennsylvania, that Dr. Buchanan had given information to the State authorities, setting forth his dealings with some twenty-two medical colleges, in this country alone, in the sale and exchange of bogus diplomas, demonstrates the necessity of prompt and stringent legislation, which will purge our State of incompetent practitioners. In Illinois, where the diplomas have undergone the careful scrutiny of the STATE BOARD OF HEALTH, seventeen hundred and fifty (1750) incompetent practitioners have been required to stop practice or leave the State. It is unnecessary at present to enter into any statements to show the absolute necessity of the legislature interfering for the protection of the people in this matter; events are daily transpiring which must soon direct the public attention to the subject with intense and fearful anxiety. Laws have already been enacted by many of the State legislatures in reference to this matter, and our own legislature should be earnestly invoked to secure to the people the same protection in this State. It is their cause, not ours; the people must employ medical men, whether they be ignorant or informed, but if they be ignorant medical men, then it is the people who suffer.

In conferring diplomas, feelings of interest, commiseration and kindness should have no weight. It is a painful thing to send a young man back to his studies who presents himself for a diploma. The kind and generous feelings of the professor rise up and plead in his behalf, and these are more imperative in proportion as the associations have been longer or more close. It is often the case that the preceptor is professor, and it would seem like condemning him to reject his pupil. Besides, when a student has paid so much money for office and lecture fees, it really seems hard to refuse the diploma. The tendency of those institutions which confer irresponsible power on the few over the many, is to insure the sacrifice of the general to particular interests; and the consideration of such practices should not fail to excite a deep interest in the thinking part of the community. It is time that the physicians of the State should exert themselves to change a system which has so long retarded the progress of their science, and been productive of so much evil in communities, and surely there is good sense enough, both in the people and the legislature, to listen to their representations.

#### SCHOOL OF MEDICINE OF THE UNIVERSITY OF MARYLAND.

Baltimore, Md., (Pop. 332 313).

Organized in 1807, as the Medical College in the City of Baltimore. In 1812, faculties of law, theology and arts were added, and the whole chartered under its present name. The degree of M.D., was first conferred in 1810, and degrees have been conferred each year since. The faculty embraces ten professors, two demonstrators, three prosectors, and fifteen private instructors.

**COURSE OF INSTRUCTION:** One regular course of twenty-two weeks' duration, and one preliminary course of ten days' duration annually. The three years' graded course is recommended but not required.—Lectures embrace chemistry, pharmacy, obstetrics, practice of medicine, surgery, materia medica, therapeutics, diseases of women and children, diseases of the eye and ear, physiology, anatomy, pathology, diseases of throat, chest, skin and nervous system.

**REQUIREMENTS:** For admission, none.—For graduation: (1) twenty-one years of age; (2) two full courses of lectures; (3) thesis; (4) evidence of attendance on clinical lectures on medicine and surgery; (5) practical anatomy course; (6) good moral character, and faithful and regular attendance on lectures and clinics.

**FEES:** Matriculation, \$5; lectures, \$120, or \$50 to poor students; demonstrator, \$10; graduation, \$30.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	135	49	36.2
1878-79	134	53	40+
1879-80	173	66	48+
1880-81	193	73	37.9
1881-82	197	73	37.8
1882-83	203	97	47.7

Average percent. of graduates to matriculates during the past six years, *forty*,

Number of graduates in Illinois, 19.

**REMARKS:** Practical courses are given on obstetrics, eye and ear, and throat and chest diseases, for which a fee of \$12 per course is charged.

#### WASHINGTON UNIVERSITY SCHOOL OF MEDICINE.

Baltimore, Md.

Organized in 1827, as the Medical Department of Washington College, Pennsylvania. The first class was graduated in 1828, and classes were graduated under the auspices of Washington College until 1840, when the Maryland Legislature empowered the institution to assume the above title. Lectures were delivered and classes graduated until 1851, when it became extinct. In 1867 the institution was reorganized and lectures were delivered until 1877, when the institution was merged into the College of Physicians and Surgeons (*vide infra*).

#### COLLEGE OF PHYSICIANS AND SURGEONS.

Baltimore, Md.

Organized in 1872. The first class was graduated in 1873. Classes have been graduated each subsequent year. In 1877 the Washington University School of Medicine was united with it.—The faculty embraces ten professors, two auxiliary professors, six lecturers and four demonstrators.

**COURSE OF INSTRUCTION:** Three years' graded course recommended, but not required; one regular course of twenty weeks' duration, and one spring course of twelve weeks' duration, are given annually; clinics in hospitals and dispensary.—Lectures embrace anatomy, physiology, materia medica, therapeutics, chemistry, gynecology, diseases of eye and ear, diseases of the nervous system, diseases of the skin, medical jurisprudence, principles and practice of medicine, principles and practice of surgery, obstetrics, clinical medicine, diseases of children, diseases of the chest and throat, hygiene.

**REQUIREMENTS:** For admission, none.—For graduation, (1) twenty-one years of age; (2) good moral character; (3) good English education; (4) three years' study; (5) satisfactory examination.

**FEES:** Lectures, \$120, or \$55 to poor students; graduation, \$30.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	165	65	39.9
1878-79	211	80	38—
1879-80	336	110	37.7
1880-81	328	143	43.6
1881-82	346	158	45.7
1882-83	322	109	33.9

Average percent. of graduates to matriculates during the first six years, *thirty-nine*.

Number of Illinois students attending the last session, 1.

Number of graduates in Illinois, 5.



## BALTIMORE MEDICAL COLLEGE.

Baltimore, Md.

Organized in 1881. The first class was graduated in 1882.—The faculty embraces seven professors, three clinical professors, three clinical lecturers, and one demonstrator.

**COURSE OF INSTRUCTION:** One course of lectures of thirty weeks' duration, annually; clinical instruction at college dispensary.—Lectures embrace anatomy, physiology, materia medica and therapeutics, obstetrics, diseases of women and children, principles and practice of medicine, hygiene, dermatology, principles and practice of surgery, diseases of the eye and ear, insanity, nervous diseases, microscopy, diseases of the chest and throat, oral surgery.

**REQUIREMENTS:** For admission, "must possess good moral characters and studious habits, and unless matriculates of some literary institution or medical college, will be required to write a brief essay, not exceeding a page of foolscap, as a test of their qualifications in orthography and grammar, and to undergo a short oral examination in the elementary branches of a good English education."—For graduation: Must be of age, and have attended two full courses of lectures. The fitness of a candidate for graduation will be based upon good behavior, and the result of a final examination in the seven primary branches of medicine.

**FEES:** Matriculation, \$5; demonstrator, \$10; lectures, \$120; graduation, \$130.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1881-82	46	17	38.2
1882-83	52	20	38.4

Average percent. of graduates to matriculates during the past two years, *thirty-eight*.

Number of Illinois students attending the last session, 3.

**REMARKS:** "Christianity being the basis upon which this college was founded, its charter requires that every professor shall declare his belief in the Christian religion to become eligible to fill his position."

## WOMAN'S MEDICAL COLLEGE OF BALTIMORE.

Baltimore, Md.

Organized in 1882. The first class was graduated in 1883.—The faculty embraces eight professors, one lecturer, one demonstrator, and nine clinical assistants.

**COURSE OF INSTRUCTION:** One regular session of twenty-eight weeks' duration "Three years' graded course recommended, but not required. The course of instruction, consists of a full series of lectures on the following subjects: principles and practice of medicine, diseases of women, obstetrics, surgery, materia medica, therapeutics, physiology, diseases of throat and chest, anatomy, operative surgery, chemistry, diseases of the eye and ear, diseases of children, hygiene, medical jurisprudence, which will be supplemented by clinical lectures upon the practical branches, by laboratory work in chemistry, materia medica and pharmacy, and by demonstrations of anatomy and histology."

**REQUIREMENTS:** For admission, satisfactory examination before a committee of the faculty on the usual elementary English branches taught in the public schools.—For graduation: (1) twenty-one years of age; (2) two full courses of lectures; (3) one full dissection; (4) evidence of having attended the clinics; (5) examination on all the branches; (6) good moral character.

**FEES:** Matriculation, \$5; lectures, \$75; demonstrator, \$10; graduation, \$30.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentage of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1882-83	19		5.2

Number of Illinois students attending the last session, 1.

## MEDICAL DEPARTMENT OF JOHNS HOPKINS UNIVERSITY.

Baltimore, Md.

Organized in 1883.

The following details are summarized from a circular of the University, announcing a course preparatory to the study of medicine:

Three classes of students are admitted to this preparatory course: First—graduate students without special examination; Second—matriculated students; Third—special students. The first and third classes are permitted to follow the biological instruction, in part or in their entire range. Special students are those who are not prepared at admission for full matriculation, but who desire to enter upon a three-years' course of scientific instruction. They are admitted to the privileges of the University, out of deference to the custom which has heretofore prevailed in this country, of requiring



no preliminary examination of those entering upon the study of medicine; but they can not compete for the degree of A.B. This arrangement, therefore, is a sort of compromise, of a temporary nature, and which will pass away with the changes and improvements that time will make in our methods. Nevertheless, the indulgence to this class is only partial, and there is laid down for it, an entrance examination in elementary mathematics, in Latin, English (including a written composition), French, German, and drawing. Matriculates, i. e. those who are candidates for the degree of A.B., are required to pass an entrance examination of a much more rigid character upon the same subjects, and in addition, upon Greek (a thorough knowledge of French and German will be accepted as a substitute for this), history, and the elements of physics, chemistry, physical geography, botany and physiology; this examination is common to all candidates for the degree of A.B. in each of the seven collegiate courses.

The full course preparatory to medicine—the full length of which will vary somewhat, according to the student's ability and industry, but "rarely, if ever, will be completed in less than three years after full matriculation"—embraces, English, German, French, logic, ethics, psychology, physical geography, ancient history, drawing, vocal culture, physical culture, the theory of accounts, physics, chemistry and biology; the last—"the study of living things, animal and vegetable, in their forms and functions"—is the dominant subject of the course, but the design is to give such liberal culture as will avoid a one-sided, or narrow development.

"Opportunities are here afforded to a young man, who expects at a later day to take up the study of medicine, to become proficient in laboratory work while acquiring a knowledge of German and French and continuing his general education. A course is arranged, in which physics for the first year, chemistry for the second, and the biological study of plants and animals for the third year, are the dominant topics. At the close of this course the student should have become proficient in a knowledge of the physical and chemical laws which underlie the conditions of life; he should have become familiar with the structure and functions of living things, in their normal and healthy condition; he should have become skilled in the use of the microscope and other physiological apparatus; and so, when he enters the school of medicine he should know that he has been well prepared for the study of disease and of its treatment, by a training in fundamental sciences, which has not only exercised his eye and hand, but has accustomed his mind to accurate habits of observation and inquiry."

## MASSACHUSETTS.

Population, 1 783 085. Number of physicians, 2845. Number of inhabitants to each physician, 623.

SAMUEL W. ABBOTT, M. D., of Wakefield, writes: "In reply to your letter requesting copies of our laws relating to the practice of medicine, I will say that we are all well aware of the excellent progress made by Illinois in this direction, and only wish that the whole Union might follow her example. Three years since a similar law was proposed, and a bill presented to the Legislature of Massachusetts. Several hearings were had before the committee on public health, but such a storm of opposition was raised by the Boston quacks as to kill the bill completely, and the feeble efforts to resurrect it have proved of no avail.

"We have an excellent law abolishing the office of coroner, entitled "The Medical Examiner Law," of 1877. This has been in force seven years, and has thus far been a great success, and a saving to the State financially, as well as a matter of credit to the profession for securing its enactment. Our system of inquests is far ahead of the old coroner system in vogue in other States."

The exposure, in November, 1882, by the ILLINOIS STATE BOARD OF HEALTH, of the fraudulent Bellevue Medical College of Massachusetts, led to the correction of a flagrant abuse in connection with the issuing of medical diplomas in Massachusetts. The "Bellevue" was organized under the "Public Statutes relating to Manufacturing and other Corporations," and its officers, on the trial which resulted from the exposure above referred to, pleaded that they were legally incorporated, and were empowered by the laws of Massachusetts to issue diplomas and confer degrees without any restriction as to course of study or professional attainments. The United States Commissioner, before whom the trial was held, held the plea to be valid, and dismissed the case, with the following remarks:

"The State has authorized this college to issue degrees, and it has been done according to legal right. \* \* \* The law makes the faculty of the college the sole judges of eligibility of applicants for diplomas. There is no legal restriction, no legal requirements. *If the faculty choose to issue degrees to incompetent persons, the laws of Massachusetts authorize it.*"

As a natural result of this decision, the "American University of Boston," and the "First Medical College of the American Health Society," were promptly incorporated under the same enactment as the "Bellevue"; the "Excelsior Medical College," and, doubtless, others were projected, and this new branch of manufacturing industry—which furnished the degree of Doctor in Medicine for \$150, C. O. D., without study or lecture attendance—developed into rather startling proportions. It suddenly wilted, however, under the passage, (June 30, 1883), of an act forbidding any corporation, organized under the public statutes above referred to, from conferring medical degrees or issuing diplomas, or certificates conferring or purporting to confer degrees, unless specially authorized by the Legislature so to do,

## MEDICAL DEPARTMENT OF HARVARD UNIVERSITY.

Boston, Mass. (Pop., 362 839.)

Organized in 1782. The first class was graduated in 1783. Classes have been graduated each subsequent year.—The faculty embraces eleven professors, six assistant professors, two instructors and one curator. There are also sixteen lecturers and assistants and thirteen clinical instructors.

**COURSE OF INSTRUCTION:** Instruction is given by lectures, clinical teaching, and practical exercises uniformly distributed throughout the academic year; one course annually of thirty-four weeks' duration, divided into two terms. Course graded, extending over three or four years. In the shorter course lectures embrace: First year,—anatomy, physiology, and general chemistry. Second year,—practical and topographical anatomy, medical chemistry, materia medica, pathological anatomy, clinical medicine, and clinical surgery. Third year,—therapeutics, obstetrics, theory and practice of medicine, clinical medicine, surgery, clinical surgery, ophthalmology, dermatology, syphilis, otology, laryngology, mental diseases, diseases of the nervous system, diseases of women, diseases of children, forensic medicine.

**REQUIREMENTS:** For admission, all candidates, excepting those who have passed an examination for admission to Harvard University, must present a degree in letters or science from a recognized college or scientific school, or pass an examination in the following subjects: (a) Every candidate shall be required to write legibly and correctly, an English composition of not less than two hundred words, and also to write English prose from dictation. (b) The translation of easy Latin prose. (c) A competent knowledge of physics. (d) Each candidate shall pass an approved examination in such one of the following branches as he may elect: French, German, the elements of algebra, or plane geometry, botany.—For graduation: Every candidate must be (1) twenty-one years of age; (2) of good moral character; (3) must give evidence of having studied medicine three or four full years; (4) have spent at least one continuous year at this school; (5) have presented a satisfactory thesis, and have passed the required examinations; (5) dissection of all "parts." Examinations mainly in writing, and distributed through the entire course, instead of being held at the end of the period of study.

**FEES:** Matriculation, \$5; lectures, full year, \$200; half year, \$120; graduation, \$30.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentage of graduates to matriculates:

Session.	Matriculates.	Graduates.	Percent.
1877-78	*73	47	—
1878-79	*99	70	—
1879-80	*96	45	—
1880-81	*69	60	—
1881-82	233	77	33
1882-83	229	74	32.3

Average percent of graduates to matriculates during the past two years, *thirty-two*.

Number of graduates in Illinois, 34.

**REMARKS:** Students who began their professional studies elsewhere may be admitted to advanced standing; but all persons who apply for admission to the advanced classes must pass an examination in the branches already pursued by the class to which they seek admission, and furnish a satisfactory certificate of time spent in medical studies. No student shall advance with his class, or be admitted to advanced standing, until he has passed the required examination in the studies of the previous year, or a majority of them; nor shall he become a member of the third class until he has passed all the examinations of the first, in addition to a majority of those in the second year.

Nine percent of the last graduating class had taken the four years' course,

BERKSHIRE MEDICAL COLLEGE (*Medical Department of Williams College.*)

Pittsfield, Mass.

Organized in 1843. Lectures were delivered until 1867, when the college became extinct. During its existence 1138 students were graduated. Graduates in Illinois, 23.

## WORCESTER MEDICAL COLLEGE.

Worcester, Mass.

Organized in 1848. Lectures were delivered until 1858 (?) when the college became extinct. Graduates in Illinois, 2.

## NEW ENGLAND FEMALE MEDICAL COLLEGE.

Boston, Mass.

Organized in 1848. Lectures were delivered and classes graduated until 1874, when it was merged into the Boston University School of Medicine, (*vide infra.*)

\*These figures represent the number of new matriculates, and not the total number in attendance.

BOSTON UNIVERSITY SCHOOL OF MEDICINE (*Homeopathic*.)

Boston, Mass.

Organized in 1873. The first class was graduated in 1874. Classes have been graduated each subsequent year. In 1874 the New England Female Medical College was united with this school.—The faculty embraces ten professors, thirteen lecturers, five assistants, and one demonstrator.

**COURSE OF INSTRUCTION:** One course of thirty weeks' duration, annually, divided into two terms. Three years' graded course required. Four years' graded course recommended. Daily examinations by the professors. Clinics at hospital and dispensary. To each term and each year certain studies are assigned, in which the student is required to become proficient before entering upon more advanced studies, and he is required to complete the studies in one year and be examined in them before entering the next.—**Lectures embrace.**—*First year:* Anatomy, general, descriptive and comparative, with dissections; histology and microscopy, physiology, human and comparative; general and medical chemistry; history and methodology of medicine.—*Second year:* Materia medica and clinical medicine, pathology and therapeutics, pathological anatomy, minor surgery, surgery and surgical pathology, obstetrics, auscultation and percussion, laryngoscopy.—*Third year:* Materia medica and clinical medicine continued, pathology and diagnosis continued, clinical and operative surgery, diseases of women, diseases of children, ophthalmology, medical jurisprudence, ethics and esthetics.

**REQUIREMENTS:** For admission, (a) a degree in arts, philosophy or science; (b) all others are examined in the following branches: (1) In orthography, English composition, and penmanship, by means of a page written at the time and place of examination.—(2) In arithmetic, geography, and English grammar, if there be doubt whether the candidate has sufficient attainment therein.—(3) In elementary physics, by an examination in Stewart's Primer of Physics.—(4) In Latin, by requiring a translation from Harkness's Latin reader at sight.—Students passing a satisfactory examination in other respects at the June examination, will be allowed till the following October to complete their requirements in Latin and physics, but will not be allowed to enter upon their studies till such conditions are removed. Candidates must be at least eighteen years old.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) three years' study; (4) thesis. Seventy percent. required to pass for graduation. Before graduation, all students will be required to furnish satisfactory written reports of at least twenty medical, five surgical, and three obstetric cases attended by them, and five cases from each of the other clinical departments.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	169	43	25.4
1878-79	149	35	23.5
1879-80	127	35	27.6
1880-81	110	26	23.6
1881-82	110	29	26.3
1882-83	109	30	27.5

Average percent. of graduates to matriculates during the past six years, *twenty-five*.

Number of graduates in Illinois, 3.

## COLLEGE OF PHYSICIANS AND SURGEONS.

Boston, Mass.

Organized in 1880. The first class was graduated in 1881.—The faculty embraces ten professors, three lecturers, three instructors, one demonstrator, and four clinical assistants.

**COURSE OF INSTRUCTION:** One course of thirty-four weeks, annually, divided into two terms. "The instruction at this college consists of didactic lectures, with demonstrations, clinical teaching, daily recitations, and practical teaching on subjects involving manipulation." Course graded, extending over three years; not absolutely required, but recommended.—Lectures embrace general and descriptive anatomy, physiology, general chemistry and histology, hygiene, materia medica, therapeutics, medical chemistry, toxicology, surgical anatomy and pathology, dermatology, laryngoscopy, obstetrics, surgery, practical medicine, clinical medicine, medical jurisprudence and gynecology, nervous diseases, ophthalmology.

**REQUIREMENTS:** For admission, at least a thorough English education.—For graduation: (1) twenty-one years of age; (2) thesis; (3) three years' study; (4) at least two courses of lectures; (5) oral and written examinations; (6) dissection of at least three parts; (7) "fulfill all requirements of laboratory work;" (8) good moral character.

**FEES:** Matriculation, \$5; lectures, \$85; demonstrator, \$5; graduation, \$50.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1880-81	49	7	13.0
1881-82	24	4	16.6
1882-83	34	10	29.9

Average percent. of graduates to matriculates during the past three years, *nineteen*.



## BELLEVUE MEDICAL COLLEGE OF MASSACHUSETTS.

Boston, Mass.

Organized in 1880. A fraudulent institution, exposed by the ILLINOIS STATE BOARD OF HEALTH in 1882.

## MEDICAL DEPARTMENT OF THE AMERICAN UNIVERSITY OF BOSTON.

Boston, Mass.

Organized in 1883. Fraudulent.

## FIRST MEDICAL COLLEGE OF THE AMERICAN HEALTH SOCIETY.

Boston, Mass.

Organized in 1883. Fraudulent.

## EXCELSIOR MEDICAL COLLEGE.

Boston, Mass.

Organized in 1883. Fraudulent.

All these institutions were established under a law regulating the organization of manufacturing, charitable, educational and religious corporations. By an act recently passed, the power of granting medical degrees is prohibited to any institution so organized (*vide supra*).

**MICHIGAN.**

Population, 1 636 937. Number of physicians, 294. Number of inhabitants to each physician, 560.

## AN ACT to Promote Public Health.

SECTION 1. The People of the State of Michigan enact, That from and after this act shall take effect, it shall not be lawful for any person to practice medicine or surgery, or any branch thereof (except dentistry), in this State, without having the qualifications required in the provisions of this act, and without having first registered in the office of the county clerk, as provided in this act.

§ 2. The necessary qualifications to practice medicine in this State shall be—

*First*—That every person who shall have actually practiced medicine continuously for at least five years in this State, and who is practicing when this act shall take effect, shall be deemed qualified to practice medicine in this State, after having registered in the office of the county clerk, as provided by this act;

*Second*—Every graduate of any legally authorized medical college in this State, or in any one of the United States, or in any other country, shall be deemed qualified to practice medicine and surgery in all its departments, after having registered as provided in this act: *Provided*, that the provisions of this act shall not be construed so as to prohibit any student or under-graduate from practicing with and under the instruction of any person legally qualified to practice medicine and surgery under and by the provisions of this act: *Provided*, that every person qualified to practice medicine and surgery under the provisions of this act shall, within three months after this act shall take effect, file with the county clerk of the county wherein he has been engaged in practice, or in which he intends to practice, a statement sworn to before any officer authorized to administer oaths in said county, setting forth, first, if he is actually engaged in practice in said county, the length of time he has been engaged in such continuous practice, and if a graduate of any medical college, the name of the same and where located, when he graduated, and the length of time he attended the same, also the school of medicine to which he belongs. And if he is a student or under-graduate, the length of time he has been engaged in the study of medicine, and where; and if he has attended a medical college, the name of the same and where located, and the length of time so attended and when, also the name and residence of the physician under whose instruction he is practicing or intends to practice. It shall be the duty of the county clerk of each county in this State to record, in a book to be provided by the county, the affidavit (or sworn statement) of every physician practicing in said county. For recording such statement, the county clerk shall receive fifty cents, to be paid by the person filing the same.

§ 3. It shall be the duty of the supervisor, at the time of making the annual assessment in each year, to make out a list of all the physicians and each student practicing under the instruction of a preceptor residing within his township, village, ward or city, with the name, age, sex, and color of each, and the length of time each has been engaged



in practice; and if a graduate of a regularly established and reputable college, the name of the college and the date of graduation. Such list shall be returned by the supervisor to the township, village or city clerk, and by the clerk recorded in the book in which are kept the records of the local board of health.

§ 4. No person who practices medicine, surgery or midwifery in any of their branches (except dentistry) shall be able, in any of the courts of this State, to collect pay for professional services rendered subsequent to the time that this act shall take effect, unless he was, at the time such professional services were rendered, duly qualified and registered as a medical practitioner according to the several provisions of this act.

§ 5. The supervisor, township, village or city clerk is hereby authorized to administer the oaths required by this act.

§ 6. Whoever advertises or holds himself out to the public as authorized to practice medicine or surgery in this State, when in fact he is not authorized under the provisions of this act, shall be deemed guilty of a misdemeanor, and, on conviction thereof, shall be liable to a fine of not less than five dollars nor more than fifty dollars for each offense.

§ 7. It shall be the duty of the supervisor and health officer of the local board of health in each township, village, ward or city, to enforce this act. This act shall take effect September 7, 1883.

#### DEPARTMENT OF MEDICINE AND SURGERY OF THE UNIVERSITY OF MICHIGAN.

Ann Arbor, Mich. (Pop. 8061.)

Organized in 1830. The first class was graduated in 1851. Classes have been graduated each subsequent year.—The faculty embraces eleven professors, three assistants to the professors and four demonstrators.

**COURSE OF INSTRUCTION:** One annual course of lectures of thirty-four weeks' duration, divided into two semesters. Frequent examinations are held by the professors or their assistants, and examinations (written) at the close of each semester. The course is graded, extending over three years, but two full courses and examination on the first year will be sufficient for graduation.—Lectures embrace, first year, anatomy, histology, physiology, chemistry, materia medica and therapeutics; second year, continuation in review of anatomy, histology, physiology, chemistry, materia medica and therapeutics, with pathology and practice of medicine, surgery and obstetrics; third year, practice of medicine, surgery, obstetrics, and the diseases of women and children, ophthalmology and otology, with clinical medicine and surgery, and clinical gynecology. The above list will be understood to include all the special studies that appertain to and form an essential part of the general subjects enumerated. Such are, histology, physiological and pathological; laboratory work in medical chemistry, in microscopy, and in electro-therapeutics; qualitative, physiological and pathological analyses; toxicology; physical diagnosis.

**REQUIREMENTS:** For admission, (1) eighteen years of age; (2) good moral character; (3) no previous study of medicine required for admission, but candidates will be examined as to their elementary education, and their fitness to pursue properly and profitably the technical study of medicine. The examination will be in writing. The candidate will be asked to give an account of his previous educational advantages, and to answer such questions in arithmetic, geography and history, and on forms of government and current events, as shall show his general intelligence; and particularly will he be required to correct imperfect English, and to show his ability to express ideas correctly in writing. Graduates or matriculates of a university or college, graduates or advanced members of any academy or high school, persons holding certificates from any public school board as being properly qualified as teachers, and persons having certificates, based upon an examination by some recognized medical society, of being properly qualified to engage in the study of medicine, will not be required to pass the above examination. For graduation—To be admitted to the degree of doctor of medicine, a student must be twenty-one years of age and possess a good moral character; he must have successfully pursued the study of practical anatomy and practical chemistry, and, unless the full course of study has been taken in this college, he must have been engaged in the study of medicine for the period of three years, including the time spent in attendance upon lectures. He must also have passed satisfactory examinations on all the studies included in the full course of instruction; or, if admitted to advanced standing, he must have attended at least two full courses of medical lectures, the last of which was at this college, and must have passed the required examinations.

**FEES:** Matriculation, for residents of Michigan, \$10; for non-residents, \$25, to be paid but once. Lectures, for residents of Michigan \$25; for non-residents, \$35. Graduation for all alike, \$10; demonstrator, \$20; laboratory, \$15.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	296	98	33 +
1878-79	329	104	31.6
1879-80	350	91	26
1880-81	380	99	26
1881-82	380	90	23.7
1882-83	366	117	32

Average percent. of graduates to matriculates during the past six years, *twenty-eight*.

Number of Illinois students attending the last session, 16.

Number of graduates in Illinois, 137.

## DETROIT MEDICAL COLLEGE.

Detroit, Mich. (Pop., 116 340.)

Organized in 1868. The first class graduated in 1869. Classes have graduated each subsequent year.—The faculty embraces eleven professors, ten lecturers and instructors, a demonstrator, and a director of dispensary clinics.

**COURSE OF INSTRUCTION:** One regular term of twenty-three weeks and a spring (recitation) term of twelve weeks. Three years' graded course recommended, but not required. Clinics at hospitals and dispensaries.—Lectures embrace chemis'try, physiology, histology, materia medica and pharmacy, practical anatomy, minor surgery, therapeutics, practical physiology and microscopy, practice of medicine and clinical medicine, surgery, obstetrics, diseases of women and children, orthopedic surgery, ophthalmology, otology, laryngology, diseases of nervous system, diseases of skin, and genito-urinary diseases.

**REQUIREMENTS:** For admission, (a) literary degree; (b) certificate of having passed the entrance examination of any incorporated literary college, or any recognized medical college in which an examination is required for admission; also certificates of having graduated at any high school or academy; (c) preliminary examination sufficient to show satisfactory knowledge of the English branches.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) three years' study; (4) two full courses of lectures, not within the same twelvemonth; (5) examination on all branches taught in the college; (6) full course of dissection; (7) satisfactory course in chemical and physiological laboratory; (8) practical clinical work for one term in hospital and out-door clinics; (9) thesis.

**FEES:** Matriculation, \$5; lectures, \$50; hospital, \$10; laboratory, \$5; graduation, \$25.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percentage.
1879-80	118	27	23—
1881-82	48	11	23—
1882-83	58	13	22.4

Average percent. of graduates to matriculates during the past three years, *twenty-two*

Number of graduates in Illinois, 13.

## DETROIT HOMEOPATHIC MEDICAL COLLEGE.

Detroit, Mich.

Organized in 1871. Extinct since 1876.

Graduates in Illinois, 2.

## HOMEOPATHIC MEDICAL COLLEGE OF THE UNIVERSITY OF MICHIGAN.

Ann Arbor, Mich.

Organized in 1875. The first class was graduated in 1877. Classes have been graduated each subsequent year.—The faculty embraces two professors, one lecturer, two assistants to chairs, three clinical assistants, a prosector, and a resident physician and surgeon in the hospital. Five professors of the department of medicine and surgery (regular school) give instruction to homeopathic students.

**COURSE OF INSTRUCTION:** One course of thirty-four weeks' duration annually; course graded, extending over three years. One course each year, although two courses *may* suffice under certain conditions (see requirements for graduation.) Daily quizzes by the assistants of the several chairs.—Lectures as follows: The first year of the course will include anatomy, histology, general chemistry, minor surgery, materia medica, principles of medicine, preparation of medicines and their action, descriptive and anatomical botany, clinics, physical diagnosis, with the necessary practical work in the chemical and physiological laboratories. This year's work in materia medica will be devoted to teaching the source, nature, origin and method of preparing remedies, with their physiological action, and a general survey of their pathogeneses.—In the second year the above studies, excepting histology and minor surgery, will be reviewed, and the student will take up general therapeutics, in connection with materia medica, diseases of women and children, obstetrics and their clinical work, materia medica, qualitative chemistry, and analysis of urine pathological anatomy, principles and practice of medicine (including hygiene or preventive medicine), principles of surgery, and ophthalmology and otology. The materia-medica work of this year will consist of special analyses and syntheses of drug-provings. In addition, the student will attend such didactic and clinical lectures on the practical branches as his progress shall render advisable.—In the third year the student will enter upon the study of operative surgery, electro-therapeutics, spinal diseases and curvatures, and review advanced studies, with practical instruction in diagnosis and treatment.

**REQUIREMENTS:** For admission, (a) good moral character; (b) unless already a matriculate of the university, or a graduate of some respectable college, academy or high school, every candidate will be examined as to his previous education and his fitness to enter upon and appreciate the technical study of medicine. The diploma or certificate of graduation from such institutions must be presented to the dean of the faculty in order to secure exemption from examination. The examination will be in writing, and will cover

the ordinary branches of an English education.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) three years' study; (4) must have attended at least seventy-five percent. of the regular lectures; (5) have spent the required time in practical anatomy, chemical analysis, etc., in the various laboratories and hospitals; (6) have attended the usual quizzes and drills by the assistants of the several chairs; (7) must also have passed satisfactory examination on all the studies included in the curriculum; or, if admitted to advanced standing, he must attend at least *two full courses* of medical lectures in this college, and pass the required examinations. Students who have completed full college courses for the first and second years in an accredited medical college will be permitted, upon examination, to enter the third year and complete the studies of that year in this department, and to present themselves for examination for the degree at the end of the year. Students who have attended one full course of lectures in any accredited medical college previous to 1880 will be admitted to advanced standing in the course required in this department, and may be graduated on the conditions in force prior to that date. Students who have studied medicine elsewhere at least one college year, and who possess superior qualifications, may be admitted, on examination, to advanced standing.

**FEES:** Matriculation, for residents of Michigan, \$10; for non-residents, \$25, (paid but once.) Lectures, for residents of Michigan, \$25; for non-residents, \$35. Graduation, for all alike, \$10. Course in chemical laboratory, \$15; in physiological laboratory, \$15; in physiological laboratory, \$1; in electro-therapeutics, \$1.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	73	22	30 +
1878-79	63	25	40—
1879-80	70	18	25.7
1880-81	88	23	26
1881-82	71	15	21 +
1882-83	57	17	29

Average percent. of graduates to matriculates during the past six years, *twenty-eight*.

Number of Illinois students attending the last session, 3.

Graduates in Illinois, 5.

#### MICHIGAN COLLEGE OF MEDICINE.

Detroit, Mich.

Organized in 1880.—Faculty embraces fourteen professors, one adjunct professor, one lecturer, one instructor, and two demonstrators of anatomy.

**COURSE OF INSTRUCTION:** One regular course of twenty-three weeks' duration annually. Three years' graded course recommended, but not required. Clinics at hospital and dispensary.—Lectures embrace physiology, chemical physics, institutes of medicine, therapeutics, gynecology, practice of medicine, clinical medicine, surgery and clinical surgery, clinical gynecology, obstetrics (clinical and didactic), and puerperal diseases, diseases of children, medical chemistry, otology, ophthalmology, laryngology, medical jurisprudence, dermatology, genito-urinary diseases, topographical anatomy, materia medica, histology, general and surgical anatomy, principles of surgery, principles of medicine, and pathology.

**REQUIREMENTS:** For admission, students entering the college, who are not in possession of the degree of a college or university, or of a certificate from a high school or other recognized educational institution, will be required to pass a satisfactory examination in the following subjects: (1) English grammar; (2) English composition (a short composition upon any subject); (3) elementary mechanics of solids and fluids; (4) arithmetic to, and including, common and decimal fractions; (5) algebra to, and including, simple equations; (6) geometry, first two books; (7) general geography and history of the United States; (8) Latin grammar and translation of easy Latin prose; (9) optional studies (one of which will be accepted in lieu of any of the above studies, except English grammar, composition and Latin), Greek, French, German, botany, zoology.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) three years' study; (4) two full courses of lectures; (5) satisfactory examination in all branches taught.

**FEES:** Matriculation, \$5; lectures, \$50; graduation, \$20.

**STUDENTS:** Members of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1880-81	—	28	—
1881-82	72	20	28
1882-83	55	28	50.9

Average percent. of graduates to matriculates during the past two years, *thirty-seven*.

Number of graduates in Illinois, 6.



**MINNESOTA.**

Population, 750 473. Number of physicians, 914. Number of inhabitants to each physician, 854.

The following is the substance of the statute, as given in the calendar (1882-83) of the University of Minnesota:

AN ACT to Regulate the Practice of Medicine in the State of Minnesota.

Be it enacted by the Legislature of the State of Minnesota :

SECTION 1. That every person practicing medicine in any of its departments shall present his diploma to the examining board hereinafter constituted, for verification as to its genuineness. If the diploma is found genuine, and if the person named therein be the person claiming and presenting the same, the board shall issue its certificate to that effect, signed by all the members thereof, and such diploma and certificate shall be conclusive as to the right of the lawful holder of the same to practice medicine in this State. If not a graduate, the person practicing medicine in this State shall present himself before said board and submit himself to examination as the said board shall require; and if the examination be satisfactory to the examiners, the said board shall issue its certificate in accordance with the facts, and the lawful holder of such certificate shall be entitled to all the rights and privileges hereinafter mentioned.

§ 2. The faculty of the medical department of the University of Minnesota shall organize as a board of examiners as herein provided, within three months after passage of this act; they shall procure a seal and shall receive, through their secretary, applications for certificates and examinations; the president or secretary shall have authority to administer oaths, and the board to take testimony in all matters relating to its duties; it shall issue certificates to all who furnish satisfactory proof of having received diplomas or licenses from legally chartered institutions in good standing; it shall prepare two forms of certificates, one for persons in possession of diplomas or licenses, the other for candidates examined by the board; it shall furnish to the county clerks of the several counties a list of all persons receiving certificates.

§ 3. Said board shall examine diplomas as to their genuineness, and if the diplomas shall be found genuine as represented, the secretary of the board shall receive a fee of one dollar from such graduate or licentiate, and no further charge shall be made to the applicant; but if it be found to be fraudulent, or not lawfully owned by the possessor, the board shall be entitled to charge and collect twenty dollars of the applicant presenting such diploma. The verification of the diploma shall consist in the affidavit of the holder and applicant presenting such diploma, that he is the lawful possessor of the same and that he is the person therein named.

§ 4. All examinations of persons not graduates or licentiates shall be made directly by the board, and the certificates given by the board shall authorize the possessor to practice medicine and surgery in the State of Minnesota.

§ 5. Requires holders of certificates to have them recorded with county clerks.

§ 6. Requires county clerks to keep a list of certificates recorded.

§ 7. Provides for a fee of \$5 to be paid into the State treasury.

§ 8. Examinations may be made in whole or in part in writing, and shall be of an elementary and practical character, but sufficiently strict to test the qualifications of the candidate as a practitioner.

§ 9. Certificates may be refused to persons guilty of unprofessional or dishonorable conduct. Appeal may be made to the board of regents.

§ 10. Any person shall be regarded as practicing within the meaning of this act, who shall profess publicly to be a physician, and to prescribe for the sick, or who shall append to his name the letters "M. D." But nothing in this act shall be construed to prohibit students from prescribing under the supervision of preceptors or to prohibit gratuitous services in case of emergency. And this act shall apply to commissioned surgeons in the United States army and navy.

§ 11. Requires itinerant venders of drugs, etc., and dealers, to pay a license fee of \$100 a month.

§ 12. Any person practicing medicine or surgery in this State without complying with the provisions of this act shall be punished by a fine of not less than fifty dollars (\$50) and not more than five hundred (\$500), or by imprisonment in the county jail for a period of not less than thirty (30) days nor more than three hundred and sixty-five (365) days, or by both such fine and imprisonment for each and every offense; and any person filing or attempting to file, as his own, the diploma or certificate of another, or a forged affidavit of identification, shall be guilty of felony, and upon conviction, shall be subject to such fine and imprisonment as are made and provided by the statutes of this State for the crime of forgery; but the penalties shall not be enforced till on and after the thirty-first (31st) day of December eighteen hundred and eighty-three (1883): *Provided*, that the provisions of this act shall not apply to those who have been practicing medicine five (5) years within this State.

Approved March 6, 1883.



## UNION MEDICAL SCHOOL.

Winona, Minn.

Organized in 1872. Extinct.

No diplomas were issued.

## MINNESOTA COLLEGE HOSPITAL.

Minneapolis, Minn. (Pop., 46 887.)

Organized in 1881. Successor to the St. Paul Medical College, organized in 1880. Faculty embraces twenty-one professors and one demonstrator.

**COURSE OF INSTRUCTION:** One regular course of nineteen weeks' duration, and one spring course of eight weeks' duration, annually.—Graded course recommended but not required.—Lectures embrace anatomy, physiology, chemistry, materia medica, pathological anatomy, clinical surgery, therapeutics, obstetrics, surgery, theory and practice of medicine, clinical medicine and surgery, dermatology, ophthalmology, otology, toxicology, histology, hygiene, nervous diseases, medical jurisprudence, physical diagnosis, genito-urinary diseases.

**REQUIREMENTS:** For admission, (a) degree in arts or sciences, (b) certificate from a high school or other institution in good standing, (c) teacher's certificate, (d) examination in the common English branches, including reading, writing, spelling, grammar, geography, arithmetic, United States history, and physics.—For graduation, (1) twenty-one years of age, (2) good moral character, (3) dissection of each part of the cadaver, (4) thesis, (5) three years' study, (6) two full courses of lectures.

**FEES:** Matriculation, \$5; lectures, \$50.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1881-82	25	5	20
1882-83	58	4	7

Average percentage of graduates to matriculates during the past two years, *thirteen*.

Number of Illinois students attending the last session, 1.

## MEDICAL DEPARTMENT OF THE UNIVERSITY OF MINNESOTA.

Minneapolis, Minn.

Organized, 1883.—Faculty embraces six professors, or examiners. The law regulating the practice of medicine in the State of Minnesota, also created this department of the State University, and defined its duties. The faculty have issued the following statement:

**REGULATIONS:** It is the duty of the faculty of this college to test and ascertain, by examinations, experiments and other appropriate means, the qualifications, proficiency and skill of all candidates for degrees in medicine and surgery, and to recommend them to the board of regents for graduation, accordingly. No instruction is offered in this college. The faculty is an examining body only. Examinations include: (1.) The entrance examination; (2.) The scientific examination; (3.) Two or more professional examinations.

I. The entrance examination embraces the English language, including writing, spelling, grammar, analysis and composition, arithmetic, elementary algebra, plane geometry, geography, United States history, general history, Latin grammar and reading or an equivalent knowledge of German, French or Scandinavian. Applicants who may have recently passed the examinations for admission to the freshman class of the collegiate department are excused from the entrance examination.

II. The scientific examination embraces physical geography, natural philosophy, elementary botany, chemistry, drawing—free-hand or mechanical. Graduates of any reputable college or university are excused from the entrance and scientific examinations.

III. The professional examinations embrace anatomy, physiology, pathology, materia medica, therapeutics, medical chemistry, preventive medicine, practice of medicine, surgery, obstetrics, diseases of women, diseases of children, diseases of the nervous system, medical jurisprudence.

**DEGREES:** All candidates who pass the entrance, scientific and professional examinations, including the appropriate clinical and experimental tests incidental thereto, and give satisfactory evidence of having pursued professional studies as required by the by-laws, being twenty-one years of age or upwards, and of good moral character, are recommended by the faculty of the college to the board of regents, to receive the degree of Bachelor of Medicine (M.B.), which degree duly conferred is the warrant of the University of Minnesota for the practice of medicine and surgery.

Whenever the examinations in any case evince a high degree of proficiency in the literature, theory and practice of medicine, the faculty of the college permit the candidate to present and defend a thesis; this being done to their satisfaction, they recommend the candidate to receive at once the full degree of Doctor of Medicine (M.D.)

Any Bachelor of Medicine of this University, who furnishes satisfactory evidence that he has been actively engaged in professional practice for three years after his graduation, and who presents and defends a thesis in the manner prescribed, is recommended to receive the degree of Doctor of Medicine (M.D.)

Doctors of Medicine of other colleges of medicine recognized by the board of regents, upon the recommendation of the faculty of this college, are recommended to receive the degree of Doctor of Medicine of this University, upon successfully defending a thesis in the manner prescribed.

All candidates for the first degree must furnish satisfactory evidence that they have severally pursued the study of medicine for four years in the office of, and under the personal direction of a physician in active practice, who is a graduate of some college or school of medicine recognized by the board of regents, upon the recommendation of the faculty of this college:

*Provided, however, that—*

(1.) One course of lectures, with other work incidental thereto, in a college of medicine recognized as above, shall be reckoned as equivalent to eight months of such study.

(2.) One term of six months in a school of medical instruction, organized and conducted in conformity with the by-laws, shall be equivalent to one year of such study under a preceptor.

(3.) Three courses of lectures, with work incidental thereto, in colleges of medicine recognized as above, shall be equivalent to three years of study under a preceptor; one year at least must, in all cases, have been passed in a preceptor's office.

(4.) Graduates of colleges and universities receive a credit of one year on professional study, in consideration of superior literary and scientific attainments.

The faculty of this college have authority to provide examinations for candidates for licenses in sanitary science, dental surgery and other specialties. Only Bachelors or Doctors of Medicine can become such candidates. All theses must be upon subjects approved by the faculty, must be founded on original work, and certified as the unaided productions of the candidates.

## MISSISSIPPI.

Population, 1,131,597. Number of physicians, 1682. Number of inhabitants to each physician, 673.

AN ACT to Regulate the Practice of Medicine in the State of Mississippi.

Be it enacted by the Legislature of the State of Mississippi:

SECTION 1. That no person shall practice medicine in the State of Mississippi, unless he shall have received a license to practice, and have registered the same as is hereinafter provided in this act.

§ 2. That there shall be established boards of censors in the State of Mississippi, one board in each congressional district, whose duty it shall be to examine into the qualification of applicants for such license,

§ 3. That the board of censors in each district shall be composed of the two sanitary commissioners of said district; and in case the members of said board shall differ in their opinions as to the qualifications of the applicant, the record of examination hereinafter provided for shall be forwarded to the secretary of the State board of health, who shall decide between them, and issue or withhold the license as the case may be.

§ 4. That examinations for license shall be in writing, and each board of censors in their examination for license to practice medicine shall be governed by such rules and regulations as shall be prescribed by the State board of health: *Provided*, said board shall not discriminate against any applicant on account of the system of practice he may advocate, and the State board of health shall have jurisdiction in cases of appeal from any decision of the board of censors. Any applicant for license whose application has been endorsed, "unfavorable," may appeal from such decision to the State board: *Provided*, such appeal is claimed by the applicant by a notice in writing, lodged with the secretary of the State board of health within thirty days from the decision of the boards of censors. The State board shall decide such appeals on the written examination, filed with the secretary, at the meeting succeeding the filing of the notice of appeal.

§ 5. That applicants for license under this act shall make their applications in writing, stating: 1st, his name in full; 2d, nativity and age; 3d, residence and postoffice; 4th, time spent in professional studies; 5th, physician or preceptor under whom studies were pursued, with postoffice address; 6th, courses of medical lectures attended; 7th, name of medical schools attended; 8th, if a graduate, name of college granting diploma; 9th, time spent in hospital, if any; 10th, time of practice, if any; 11th, school of practice chosen; 12th, references as to character.

§ 6. That applicants for license shall be examined only on the following branches of medicine, viz: anatomy, chemistry, obstetrics, materia medica, physiology, pathology, surgery, hygiene.

§ 7. That applicants for license shall deposit with their applications, each a fee of fifteen dollars and twenty-five cents, fifteen dollars of which shall be appropriated to the use of the board of censors as their remuneration, and out of which the expense of advertising the time and place of meetings of said board of censors, as is hereinafter provided, shall be paid; and twenty-five cents of said fee shall be forwarded to the secretary of the board of health, as a fee for services hereinafter provided for.

§ 8. That an applicant for license whose examination proves satisfactory to the board of censors, shall have a certificate to that effect furnished him by the board of censors, which certificate shall entitle him to practice medicine in the State of Mississippi for the period of thirty (30) days from the date thereof, and it shall be the duty of the board of censors to endorse the application "favorable" or "unfavorable," as may be determined by the board of censors, and forward it, together with the record of examination, with twenty-five cents (25 cents) to the secretary of the state board of health, who shall register said application, in a book kept for that purpose, and file it for future reference.

§ 9. That in case a "favorable" indorsement is given the application, the State board of health, through their secretary, shall forward at once, to the applicant, a license to practice medicine in the State of Mississippi, and such license shall bear upon its face all the statements that appear upon the application, and shall be signed by the secretary and sealed with the seal of the State board of health.

§ 10. That every person holding a license to practice medicine, shall have a transcript of the same recorded in the office of the circuit clerk of the county in which he resides, in a book kept for that purpose, and the circuit clerk shall attach to said license his certificate of record, and the clerk shall be entitled to a fee of one dollar and fifty cents, to be paid by the said licensee.

§ 11. That if a license be not presented for record within thirty days from its date, the license shall be void and of no effect.

§ 12. That when a licensed practitioner of medicine changes his residence into a county other than that in which his license is recorded, said license must be recorded as at first in the office of the circuit clerk of the county in which he intends to reside, before he can engage in the practice of medicine in his new location; a certificate of which record shall be furnished by the circuit clerk to the secretary of the State board of health, for which service the clerk shall be entitled to a fee of one dollar and sixty cents.

§ 13. That physicians living in other States near the borders of the State of Mississippi, engaged in the practice of medicine, whose practice extends into the State of Mississippi, may obtain license to practice in this State in the same manner as is required of resident physicians, said licenses to be recorded in the office of the clerks of the circuit courts in the county or counties in which they practice in this State; and this act shall not be construed so as to prevent physicians or surgeons from other States from treating cases in this State in charge of regular licensees of this State.

§ 14. That in case a license is lost, upon application, accompanied by a fee of ten cents, it shall be the duty of the secretary of the State board of health to issue a duplicate license in lieu of the one lost, and forward the same to said applicant.

§ 15. That a temporary license may be granted an applicant by the State board of health, through their secretary, by virtue of which a person may practice medicine; but such temporary license shall specify upon its face the time for which it is granted, and shall be void after the next regular meeting of the board of censors of the district in which the licensee may reside; but no succeeding application for temporary license for the same person shall be entertained by the State board of health, and the secretary of the State board of health shall be entitled to a fee of twenty-five cents for each temporary license granted.

§ 16. That for the purpose of examining applicants for license under this act, the board of censors shall hold quarterly sessions, viz: on the second Monday in March, June, September and December in each year, at some convenient place near the centre of the congressional district in which they reside. Thirty days' notice of said sessions shall be given by publication in one or more newspapers published in said district.

§ 17. That every physician now practicing medicine in the State of Mississippi shall receive his license, without an examination as to qualification, from the State board of health, through their secretary, upon application for such license, accompanied by a fee of ten cents; said application to contain, under oath, the applicant's: 1st, name in full; 2d, nativity and age; 3d, residence and post office; 4th, time spent in professional studies; 5th, physician or preceptor under whom studies were pursued, with postoffice address of same; 6th, courses of medical lectures attended; 7th, name of medical school attended; 8th, if a graduate, name of college granting diploma; 9th, time spent in hospital, if any; 10th, time of practice, if any; 11th, school of practice chosen; 12th, reference as to character: *Provided*, that such application is made by the 30th day of June, A. D. 1882, and if such license shall not have been recorded or filed within thirty days after its issuance, as heretofore provided, said license shall be void and of no effect: *Provided*, further, that said license shall show that it was granted under the 17th section of this act.

§ 18. That the secretary of State shall furnish blanks and books of record to the State board of health, and books of record to the circuit clerks of each county, ruled and lined and otherwise prepared, as may be prescribed by the State board of health as necessary for the proper enforcement of the provisions of this act.

§ 19. That any person making false statements in his application for license, shall be guilty of a misdemeanor, and on conviction thereof, shall be fined in a sum of not more than twenty-five dollars; and upon proof of such conviction, the State board of health



shall revoke his license, and the State board of health shall notify the circuit clerk of the county in which said license may have been recorded, of such revocation, and it shall be the duty of the circuit clerk to erase the name of said person from the record.

§ 20. That, for the purposes of this act, the words "practice medicine" shall mean to suggest, recommend, prescribe or direct, for the use of any person, any drug, medicine, appliance or other agency, whether material or not material, for the cure, relief or palliation of any ailment or disease of the mind or body, or for the cure or relief of any wound, fracture, or other bodily injury, or any deformity, after having received, or with the intent of receiving therefor, either directly or indirectly, any bonus, gift, or remuneration: *Provided*, that nothing in this act shall apply to females engaged in the practice of midwifery.

§ 21. That peripatetic quacks and traveling charlatans shall not be licensed to practice medicine, as provided for in the 17th section of this act.

§ 22. That it shall be the duty of the several judges of the circuit courts to give this Act in charge to the grand juries at every term of their several courts; and it shall be the duty of the circuit clerk of each county in the State to furnish a list of persons registered in their offices, under this act, to the grand jury on the first day of each term of their several courts.

§ 23. That every person or persons offending against the provisions of this act shall be guilty of a misdemeanor, and upon conviction thereof, shall, for each offence, be fined in a sum of not less than fifty nor more than five hundred dollars, or be imprisoned in the county jail not less than ten nor more than thirty days, or both such fine and imprisonment at the discretion of the court.

§ 24. That this act shall take effect and be in force from and after its passage.

Approved February 28, 1882.

## MISSOURI.

Population, 2 168 380. Number of physicians, 4550. Number of inhabitants to each physician, 476.

AN ACT to Regulate the Practice of Medicine and Surgery in the State of Missouri.

Be it enacted by the General Assembly of the State of Missouri, as follows:

SECTION 1. Every person practicing medicine and surgery, in any of their departments, shall possess the qualifications required by this act. If a graduate of medicine, he shall present his diploma to the State board of health for verification as to its genuineness. If the diploma is found to be genuine, and the person named therein be the person claiming and presenting the same, the State board of health shall issue its certificate to that effect, signed by at least five of the members thereof, and such diploma and certificate shall be deemed conclusive as to the right of the lawful holder of the same to practice medicine in this State. If not a graduate, the person practicing medicine in this State shall present himself before said board and submit himself to such examination as the said board shall require, and if the examination be satisfactory to the examiners, the said board shall issue its certificate in accordance with the facts, and the lawful holder of such certificate shall be entitled to all the rights and privileges herein mentioned.

§ 2. The State board of health shall issue certificates to all who shall furnish satisfactory proof of having received diplomas or licenses from legally chartered medical institutions in good standing, of whatever school or system of medicine; they shall prepare two forms of certificates, one for persons in possession of diplomas or licenses, the other for candidates examined by the board; they shall furnish to the county clerks of the several counties a list of all persons receiving certificates: *Provided*, that nothing in this act shall authorize the board of health to make any discrimination against the holders of genuine licenses or diplomas under any school or system of medicine.

§ 3. Said State board of health shall examine diplomas as to their genuineness, and if the diploma shall be found genuine as represented, the secretary of the State board of health shall receive a fee of one dollar from each graduate or licentiate, and no further charge shall be made to such applicant; but if it be found to be fraudulent, or not lawfully owned by the possessor, the board shall be entitled to charge and collect twenty dollars of the applicant presenting such diploma; the verification of the diploma shall consist in the affidavit of the holder and applicant; that he is the lawful possessor of the same, and that he is the person therein named; such affidavit may be taken before any person authorized to administer oaths, and the same shall be attested under the hand and official seal of such officer, if he have a seal. Graduates may present their diplomas and affidavits as provided in this act, by letter or by proxy, and the State board of health shall issue a certificate as though the owner of the diploma was present.

§ 4. All examinations of persons not graduates or licentiates shall be made directly by the board, and the certificates given by the board shall authorize the possessor to practice medicine and surgery in the State of Missouri.



§ 5. Every person holding a certificate from the State board of health shall have it recorded in the office of the county clerk of the county in which he resides, and the record shall be indorsed thereon; any person removing to another county to practice medicine and surgery, shall procure an endorsement to that effect on the certificate from the clerk of the county court, and shall have the certificate recorded in the office of the clerk of the county to which he removes, and the holder of the certificate shall pay to said clerk of said county the usual fees for making the record.

§ 6. The county clerk shall keep, in a book provided for the purpose, a complete list of all certificates recorded by him, with the date of the issue. If the certificate be based on a license, he shall record the name of the medical institution conferring it.

§ 8. That, when conferred. The register of the county clerk shall be open to public inspection during business hours.

§ 7. (Providing for the payment of an examination fee of five dollars was amended by the striking out the entire section.)

§ 8. Examinations may be made in whole or in part, in writing, and shall be of an elementary and practical character, but sufficiently strict to test the qualifications of the candidate as a practitioner.

§ 9. The board of health may refuse certificates to individuals guilty of unprofessional or dishonorable conduct, and they may revoke certificates for like causes, after giving the accused an opportunity to be heard in his defense before the board.

§ 10. Any person shall be regarded as practicing medicine, within the meaning of this act, who shall profess, publicly, to be a physician, and to prescribe for the sick, or who shall append to his name the letters "M.D.:" but nothing in this act shall be construed to prohibit students from prescribing under the supervision of a preceptor, or to prohibit gratuitous services in cases of emergency; and this act shall not apply to commissioned surgeons of the United States army, navy and marine-hospital service.

§ 11. Any itinerant vendor of any drug, nostrum, ointment or appliance of any kind intended for the treatment of disease or injury, or who shall, by writing or printing, or any other method, publicly profess to cure or treat diseases, injuries or deformities by any drug, nostrum, manipulation or other expedient, shall pay to the State a license of one hundred dollars per month, to be collected as provided by law, as all other licenses are now collected, and any person violating the provisions of this section shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be punished by a fine not to exceed five hundred dollars (\$500), or by imprisonment in the county jail not to exceed six months, or by both such fine and imprisonment.

§ 12. Any person practicing medicine or surgery in this State, without complying with the provisions of this act, shall be deemed guilty of a misdemeanor, and be punished by a fine of not less than fifty dollars, nor more than five hundred dollars, or by imprisonment in the county jail for a period of not less than thirty days, or by both such fine and imprisonment for each and every offense; and any person filing or attempting to file, as his own, the diploma or certificate of another, or a forged affidavit of identification, shall be guilty of a felony, and, upon conviction thereof, shall be subject to such fine and imprisonment as are made and provided by the statutes of this State for the crime of forgery in the second degree, but the penalties shall not be enforced until a period of six months after the passage of this bill: *Provided*, that the provisions of this act shall not apply to those that have been practicing medicine five years in this State.

§ 13. Whenever in this act it is provided that any duty or service shall be performed by any county clerk, such duty and service in the city of St. Louis shall be performed by the city register or health commissioner of the city of St. Louis, as if such officer was specially named to perform these duties and services.

§ 14. All acts and parts of acts inconsistent with this act are hereby repealed.

Went into effect July, 1883.

The act providing for a State board of health also became a law July 1, 1883, and the board has been appointed. By sec. 8 of this act, physicians, surgeons and accoucheurs are required, under a penalty of ten dollars, to report all births and deaths which may occur under their supervision.

#### MISSOURI MEDICAL COLLEGE.

St. Louis, Mo. (Pop., 350,518.)

Organized in 1840, as the Medical Department of Kemper College. In 1845 it became the Medical Department of the University of Missouri. In 1855 it assumed its present name. The first class was graduated in 1841. It was suspended during the war, and no students graduated in 1862, '63, '64 or '65. It is sometimes called after its founder, The McDowell Medical College.—The faculty embraces eleven professors, two adjunct professors, one clinical lecturer, two clinical assistants and two demonstrators.

**COURSE OF INSTRUCTION:** One regular course of twenty weeks' duration; one spring course of eleven weeks' duration, annually. Three years' graded course recommended, but not required. Clinics at hospitals and dispensary.—Lectures embrace anatomy, physiology, histology, chemistry, materia medica, hygiene, medical jurisprudence, theory and practice of medicine, practice of surgery, obstetrics, pathological anatomy, gynecology, ophthalmology, therapeutics, clinical medicine, mental and nervous diseases, pharmacy, otology, laryngology, diseases of children, physical diagnosis, dermatology.

**REQUIREMENTS:** For admission, "a preliminary examination will be held in accordance with the rules of the State board."—For graduation: (1) twenty-one years of age, (2) good moral character, (3) attendance on clinics and dissections for one term, (4) satisfactory examination, (5) two courses of lectures.

FEES: Matriculation, \$5; lectures, \$60; graduation, \$30; demonstrator, \$10.

STUDENTS: Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	240	97	40.4
1878-79	225	90	40
1879-80	300	120	40
1880-81	265	123	46.4
1881-82	235	125	53
1882-83	210	86	41

Average percentage of graduates to matriculates during the past six years, *forty-five*.

Number of Illinois students attending the last session, 31.

Number of graduates in Illinois, 240.

#### ST. LOUIS MEDICAL COLLEGE.

St. Louis, Mo.

Organized in 1841, as the medical department of the St. Louis University. In 1855 it was chartered as an independent institution under its present name. The first class was graduated in 1843. Classes have been graduated each subsequent year.—The faculty embraces ten professors, one assistant, eight lecturers and three demonstrators.

COURSE OF INSTRUCTION: One regular course of twenty-one weeks' duration; one spring course of eleven weeks' duration, annually. Course graded, extending over three years, divided as follows:—*Lectures embrace—First term*, chemistry, chemical laboratory practice, anatomy, dissections, histology, histological demonstrations, physiology, materia medica.—*Second term*, chemistry, anatomy, dissections, physiology, materia medica and therapeutics, pathological anatomy, principles and practice of medicine, medical clinics, clinics for diseases of children, surgical clinics. *Third term*, dissections, principles and practice of medicine, principles and practice of surgery, ophthalmology, obstetrics, diseases of women, diseases of children, hygiene and forensic medicine, medical clinics, children's clinics, surgical clinics, ophthalmic clinics, gynecological clinics, clinics for diseases of the genito-urinary organs, obstetrical out-clinics.

REQUIREMENTS: For admission, (a) diploma of college or high school; or (b) satisfactory examination in the branches of a good English education, including grammar, orthography, composition, physics.—For graduation: (1) twenty-one years of age, (2) good moral character; (3) three years' study; (4) *must have attended three regular courses of lectures*; (4) examination in chemistry, anatomy, physiology, materia medica, therapeutics, principles and practice of medicine, clinical medicine, surgery, obstetrics, hygiene and forensic medicine.

FEES: Matriculation, (paid but once), \$5. Term fee, including demonstrators, laboratory and hospital tickets, \$90.

STUDENTS: Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	180	47	26
1878-79	170	54	31.7
1879-80	163	41	25
1880-81	153	43	28
1881-82	167	29	17.3
1882-83	134	40	30

Average percent. of graduates to matriculates during the past six years, *twenty-six*.

Number of Illinois students attending the last session, 36.

Number of graduates in Illinois, 244.

REMARKS: Students having attended lectures at other colleges can only be admitted to advanced standing by passing the examinations for the proper years.

#### MEDICAL SCHOOL OF THE UNIVERSITY OF THE STATE OF MISSOURI.

Columbia, Mo. (Pop. 3326.)

Organized in 1845.—The first class was graduated in 1846. From 1845 to 1855 the medical department was situated at St. Louis. See Missouri Medical College. No degrees were conferred during the war, 1861-'65.—Faculty embraces eight professors, three lecturers, and four examiners for medical degrees, appointed from as many district medical societies.

COURSE OF INSTRUCTION: One junior course of thirty weeks' duration, and one senior course of lectures of thirty-four weeks' duration. Course graded, but requiring only two years for completion. Daily examinations and recitations in clinics at dispensary.—*Lectures embrace—Junior class*: anatomy, physiology, chemistry, materia medica, medical botany, surgery, physics, metric system of weights and measures, laboratory work, dissecting and medical jurisprudence.—*Senior class*: anatomy, toxicology, surgery, obstetrics, practice of medicine, lectures by special professors, laboratory work (optional), dissecting and medical jurisprudence.

**REQUIREMENTS:** For admission, none. Before entering the senior class must pass a satisfactory examination upon: (1) English grammar (Harvey) and orthography; (2) rhetoric (Hart); (3) history of the United States (Swinton) and its geography; (4) arithmetic (the four fundamental rules, denominate numbers and common fractions).—For graduation: (1) twenty-one years of age; (2) good moral character; (3) last course in this school; (4) satisfactory examination upon the prescribed course; (5) regular attendance on clinics and lectures; (6) practical anatomy and chemistry, one course; (7) thesis. Percentages required at final examination are, anatomy and physiology, 85; chemistry, toxicology, pharmacy, 60; all others, 75.

**FEES:** Lectures, \$40; demonstrator, \$10; graduation, \$5.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates:

Session.	Matriculates.	Graduates.	Percent
1877-78	22	8	36.3
1878-79	36	6	16.6
1879-80	43	9	20.9
1880-81	40	5	12.5
1881-82	35	7	20
1882-83	25	9	36

Average percent of graduates to matriculates during the past six years, *twenty-three*.

**REMARKS:** *No student is allowed to attend both courses the same year.* Before he is permitted to present himself before the board of examiners, appointed as noted, he must either have attended two (2) courses of eight or nine months in this institution, or present tickets showing that he has attended *at least one* course in some regular reputable medical college; and in any event, must pass a satisfactory examination in the subjects embraced in the junior course, previous to his entering the senior class.

#### HUMBOLDT MEDICAL COLLEGE.

St. Louis, Mo.

Organized, 185—, Extinct since 1867.

Number of graduates in Illinois, 1.

#### HOMEOPATHIC MEDICAL COLLEGE OF MISSOURI.

St. Louis, Mo.

Organized, originally, in 1859; reorganized in 1882. Between the years 1869 and 1881, the following homeopathic colleges were organized in St. Louis, viz: The St. Louis College of Homeopathic Physicians and Surgeons, organized 1869; held two sessions and suspended after session of 1870-71. The Homeopathic Medical College of St. Louis, organized 1873. The Hering Medical College, organized in 1880. In 1880 a portion of the faculty of the Homeopathic Medical College of Missouri seceded and revived The St. Louis College of Homeopathic Physicians and Surgeons, which again held two sessions; but after the session of 1881-82 this college and the Hering were consolidated with the Homeopathic Medical College of Missouri.—The faculty of this college embraces twelve professors.

**COURSE OF INSTRUCTION:** One regular course of nineteen weeks' duration, annually. Clinics at hospital and dispensary.—Lectures embrace physiology, diseases of children, operative and clinical surgery, obstetrics, gynecology, nervous and mental diseases, ophthalmology, otology, theory and practice of medicine, materia medica, therapeutics, sanitation, medical jurisprudence, principles and practice of surgery, anatomy, chemistry, toxicology.

**REQUIREMENTS:** For admission, "An applicant for registration must be of the male sex, give evidence of good moral character, and furnish credentials of suitable literary and scientific qualifications for entering upon a course of medical studies."—For graduation: (1) twenty-one years of age; (2) good moral character; (3) three years' study; (4) two full courses of lectures; (5) satisfactory examination on all branches taught in the college.

**FEES:** Matriculation, \$5; lectures, \$50; graduation, \$25; demonstrator, \$10.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentage of graduates to matriculates:

Session.	Matriculates.	Graduates.	Percent.
1882-83	41	11	27

Number of Illinois students attending the last session, 2.

Number of graduates in Illinois, 8.

**REMARKS:** Honorary degrees may be conferred on distinguished practitioners on the recommendation of the faculty to the board of trustees.

## KANSAS CITY MEDICAL COLLEGE.

Kansas City, Mo., (Pop., 55 785.)

Organized in 1864, as the College of Physicians and Surgeons of Kansas City. The first class was graduated in 1865; classes have been graduated each subsequent year. Assumed its present name in 1880.—Faculty embraces twelve professors, one adjunct professor, two lecturers and two demonstrators.

COURSE OF INSTRUCTION: A preliminary course of two weeks' duration, and a regular course of twenty weeks' duration, annually. Hospital and dispensary clinics. Graded course recommended but not required.—Lectures embrace anatomy, physiology, chemistry, diseases of children, diseases of genito-urinary organs, materia medica and therapeutics, surgery, principles and practice of medicine, obstetrics and diseases of women, ophthalmology and otology, histology and urinary chemistry, attendance on surgical and medical clinics, dissection and laboratory work.

REQUIREMENTS: For admission, none.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) three years' study; (4) two full courses of instruction; (5) personal examination on the seven principal branches of medicine.

FEES: Matriculation, (paid but once) \$5; lectures, \$50; demonstrator, \$10; hospital, \$3; graduation, \$20.

STUDENTS: Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	31	9	29
1878-79	31	9	29
1879-80	44	17	38.6
1880-81	42	12	28.5
1881-82	32	16	50
1882-83	36	12	33.3

Average percent. of graduates to matriculates during the past six years, *thirty-six*.

Number of graduates in Illinois, 2.

## ST. LOUIS COLLEGE OF HOMEOPATHIC PHYSICIANS AND SURGEONS.

St. Louis, Mo.

Organized in 1869. Suspended after the session of 1870-71.—See Homeopathic Medical College of Missouri.

Number of graduates in Illinois, 4.

## ST. LOUIS ECLECTIC MEDICAL COLLEGE.

St. Louis, Mo.

Organized 187—. See List of Institutions not recognized by the ILLINOIS STATE BOARD OF HEALTH.

## HOMEOPATHIC MEDICAL COLLEGE OF ST. LOUIS.

St. Louis, Mo.

Organized 1873.—Extinct. See List of Institutions not recognized by the ILLINOIS STATE BOARD OF HEALTH.

AMERICAN MEDICAL COLLEGE (*Eclectic*).

St. Louis, Mo.

Organized in 1873. The first class was graduated in 1874. Classes have been graduated twice annually since that date to 1883.—The faculty embraces ten professors and one adjunct professor.

COURSE OF INSTRUCTION: One preliminary course of two weeks' duration, and one regular course of twenty weeks' duration, annually. Two clinics are held each week at the hospital and dispensary.—Lectures embrace theory and practice of medicine, chemistry, pharmacy, toxicology, obstetrics, diseases of women and children, principles and practice of surgery, materia medica, therapeutics, anatomy, physiology, microscopy, histology, medical jurisprudence.

REQUIREMENTS: For admission, "a good elementary English education, including mathematics, English composition and elementary physics or natural philosophy, as attested by the presentation of a diploma, from some literary and scientific college or high school, or by creditable examination upon those branches by a committee appointed for that purpose." For graduation: (1) good moral character; (2) twenty-one years of age;



(3) two courses of lectures; (4) three years' study; (5) "must show a record of faithful attendance both at the college and hospital lectures." "At the close of the session each professor examines in his own department, and the standing of each student is based upon a percent."

**FEES:** Tickets for the session, including matriculation and demonstrator's ticket, \$75; graduation, \$25.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	120	78	65
1878-79	66	36	54.5
1879-80	95	42	44.2
1880-81	66	22	33.3
1881-82	118	40	33.9
1882-83	114	38	33.3

Average percent. of graduates to matriculates during the past six years, *forty-four*.

Number of Illinois students attending the last two sessions ('82-'83), both in the same twelve-month, 15.

Number of graduates in Illinois, 99.

**REMARKS:** Prior to 1883, two courses were delivered annually. Hereafter but one annual course will be delivered.

#### ST. JOSEPH HOSPITAL MEDICAL COLLEGE.

St. Joseph, Mo.

Organized in 1876. Five classes, containing forty-five students, were graduated. In 1882, this college was merged into the St. Joseph Medical College, (*vide infra*).

#### COLLEGE OF PHYSICIANS AND SURGEONS, OF ST. JOSEPH.

St. Joseph, Mo.

Organized in 1878. Three classes, containing fifty students, were graduated. In 1882, this college was merged into the St. Joseph Medical College, (*vide infra*).

#### ST. LOUIS COLLEGE OF PHYSICIANS AND SURGEONS.

St. Louis, Mo.

Organized in 1879. The first class was graduated in 1880.—The faculty embraces thirty-two professors and two lecturers.

**COURSE OF INSTRUCTION:** A preliminary course, of four weeks' duration, and a regular course, of eighteen weeks' duration, annually. Three years' graded course recommended, but not required.—Lectures embrace dermatology, diseases of children, medical jurisprudence, histology, ophthalmology, otology, materia medica, toxicology, chemistry, surgery, orthopedic surgery, operative surgery, clinical medicine, hygiene, mental and nervous diseases, anatomy, physiology, obstetrics, diseases of women, practice of medicine.

**REQUIREMENTS:** For admission: "All candidates must present credible certificates of good moral character, and furnish evidences of possessing a good common-school education. Graduates of literary colleges and high schools will be received without examination regarding preliminary qualification. All others will be examined by the dean, or registrar."—For graduation, (1) twenty-one years of age; (2) a good moral character; (3) at least three years' study of medicine; (4) attendance on two courses of lectures.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1879-80	19	5	26.3
1880-81	41	9	22—
1881-82	49	12	24.5
1882-83	69	31	45

Average percent. of graduates to matriculates during the past two years, *thirty-two*.

Number of Illinois students attending the last session, 11.

Number of graduates in Illinois, 11.

**REMARKS:** "Reputable practitioners of medicine, non-graduates, but who possess certificates authorizing them to practice from boards of health of their respective States \* \* \* may be admitted to the graduating class one month before the close of the session \* \* \* and will be examined only upon medicine, surgery and obstetrics."

## JOPLIN COLLEGE OF PHYSICIANS AND SURGEONS.

Joplin, Mo. (Pop., 7038.)

Organized in 1880. The first class was graduated in 1881.—The faculty embraces six professors, five lecturers, and one demonstrator.

**COURSE OF INSTRUCTION:** Regular course, of nineteen weeks' duration, and a spring course, of twelve weeks' duration, annually. Quizzes by the professors, daily. Graded course recommended, but not required.—Lectures embrace anatomy, minor surgery, physiology, microscopic anatomy, chemistry, materia medica, theory and practice of medicine, obstetrics, gynecology, surgery, clinical surgery, diseases of children, otology, ophthalmology, electro-therapeutics, medical jurisprudence, therapeutics.

**REQUIREMENTS:** For admission: "While it is not the wish of the faculty to prevent any worthy man from acquiring a medical education, yet they believe that medical men should have a knowledge of at least the common English branches, and that any man who is worthy to fill the high post of a physician will readily acquire this knowledge. Therefore, candidates for admission will be required to pass a thorough examination in the common English branches, including natural philosophy. Candidates possessing diplomas from a good literary or scientific college, or high school, will be exempt from this examination. Candidates must also present evidences of good moral character."—For graduation: (1) good moral character, (2) twenty-one years of age, (3) three years' study, (4) two complete courses of lectures [Allowance for absence will be made for not more than twenty *per centum* of the course, and then only when occasioned by the student's sickness.] (5) dissection during both courses, (6) regular attendance at clinics during both courses, (7) regular attendance at quizzes during both courses, (8) satisfactory examination in each branch taught in the college.

**FEES:** Matriculation, \$5; lectures, \$30; demonstrator, \$5; graduation, \$20.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1880-81	23	11	47.8
1881-82	45	34	75.5
1882-83	41	18	44 —

Average percent. of graduates to matriculates during the past three years, *fifty-seven*.

Number of Illinois students attending the last session, 1.

**REMARKS:** At the April, 1883, meeting of the ILLINOIS STATE BOARD OF HEALTH, charges against this college being under consideration, it was resolved that its diplomas would be recognized in the future by said BOARD, *whenever and so long as it shall appear that its methods and practices entitle it to such recognition.*

## HERING MEDICAL COLLEGE (Homeopathic.)

St. Louis, Mo.

Organized 1880.—See Homeopathic Medical College of Missouri.

Number of graduates in Illinois, 1.

## NORTHWESTERN MEDICAL COLLEGE OF ST. JOSEPH.

St. Joseph, Mo. (Pop. 32 431.)

Organized in 1880.—The first class was graduated in 1881.—The faculty embraces eight professors and four lecturers.

**COURSE OF INSTRUCTION:** One session of nineteen weeks' duration annually.—Lectures embrace principles and practice of medicine, chemistry, toxicology, diseases of the chest, obstetrics, gynecology, surgery, anatomy, physiology, nervous diseases, materia medica, therapeutics, diseases of children, minor surgery, pathology, genito-urinary diseases, medical jurisprudence.

**REQUIREMENTS:** For admission, none.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) two full courses; (4) satisfactory examination; (5) thesis.

**FEES:** For the entire course, \$40; graduation, \$25.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1880-81	40	23	57.5
1881-82	40	26	65
1882-83	31	18	58

Average percent. of graduates to matriculates during the past three years, *sixty*.

Number of Illinois students attending the last session, 1.

**REMARKS:** "While the subject of medical teaching is, at present, in a very confused and unstable condition everywhere, we think it but the part of common sense for each school to adopt the rules and regulations deemed best for its own prosperity. This the originators of the Northwestern College have done, regardless of foreign suggestions."—Extract from the Fourth Annual Announcement.

## JOPLIN MEDICAL COLLEGE.

Joplin, Mo.

Organized in 1881.—Extinct. See List of Institutions not recognized by the ILLINOIS STATE BOARD OF HEALTH.

## MEDICAL DEPARTMENT OF THE UNIVERSITY OF KANSAS CITY.

Kansas City, Mo.

Organized in 1881.—The first class was graduated in 1882.—The faculty embraces nineteen professors, five adjunct professors, and one lecturer.

**COURSE OF INSTRUCTION:** One regular session of twenty-six weeks' duration, and one spring session of ten weeks' duration, annually. "The usual methods of instruction will be followed, embracing clinics, lectures and dissections, together with frequent oral examinations." Three years' graded course recommended, but not required.—Lectures embrace principles and practice of medicine, obstetrics, gynecology, pathology, principles and practice of surgery, materia medica, pharmacy, therapeutics, general, descriptive and surgical anatomy, physiology, chemistry, medical jurisprudence, clinical medicine, physical diagnosis, clinical and operative surgery, nervous and mental diseases, ophthalmology, otology, histology, orthopedic surgery, diseases of children, hygiene, diseases of chest, throat and genito-urinary organs, and dermatology.

**REQUIREMENTS:** For admission:—"Every applicant must be of good moral character, and possess the evidences of a good English education. He should also possess sufficient knowledge of Latin to read and write current prescriptions."

The following resolution has been passed by the faculty since the issuance of the announcement:

*Resolved,* That the dean of the faculty, prior to matriculating any student, shall ascertain by examination, either oral or written, or both, that the applicant has the necessary prerequisites as published in the announcement.

For graduation: (1) twenty-one years of age; (2) good moral character; (3) three years' study; (4) two full courses; (5) clinical instruction during one term; (6) dissection of each region; (7) full and satisfactory examination in each branch.

**FEES:** Matriculation, \$5; lectures, \$53; demonstrator, \$10; graduation, \$25.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1881-82	25	11	44
1882-83	28	8	38.6

Average percent. of graduates to matriculates during the past two years, *forty-one*.

## ST. JOSEPH MEDICAL COLLEGE.

St. Joseph, Mo.

(*Formed by the union of the St. Joseph Hospital Medical College and College of Physicians and Surgeons of St. Joseph.*)

Organized in 1882. The first class was graduated in 1883.—The faculty embraces twelve professors, three lecturers and one demonstrator.

**COURSE OF INSTRUCTION:** One regular course of lectures of nineteen weeks' duration, annually. Clinics at hospital and dispensary. Three years' graded course recommended, but not required.—Lectures embrace chemistry, histology, anatomy, therapeutics and materia medica, principles and practice of medicine, operative surgery and surgical pathology, medica jurisprudence, genito-urinary diseases, gynecology, mental and nervous diseases, hygiene, dental surgery, diseases of children, surgery, physiology, obstetrics.

**REQUIREMENTS:** For admission, none.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) three years' study; (4) two full courses of lectures; (5) dissection "continuously"; (6) hospital clinics; (7) satisfactory examination on all branches taught in this college; (8) thesis.

**FEES:** Matriculation, \$5; lectures, \$35; demonstrator, \$10; graduation, \$35.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentage of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1882-83	24	8	33.3

Number of graduates in Illinois, 2.

**REMARKS:** A second (summer) examination is held for candidates who do not pass an entirely satisfactory examination in certain departments, not exceeding three in number. If they pass these examinations, which are held six months after the regular examination, "they will be recommended to the board of trustees for the degree."

## KANSAS CITY COLLEGE HOSPITAL OF MEDICINE.

Kansas City, Mo.

Organized in 1832. The first class was graduated in 1883.—The faculty embraces eleven professors, two lecturers, and one demonstrator.

**COURSE OF INSTRUCTION:** One regular term of twenty weeks' duration, annually.—Lectures embrace "orthopedic, military and clinical surgery, and allopathic materia medica" (both by the same professor); gynecology and principles of surgery (ditto); medical electricity and diseases of nervous system (ditto); diseases of women and children; obstetrics; "allopathic theory and practice and clinical medicine"; "homeopathic therapeutics and materia medica and theory and practice"; anatomy and diseases of genito-urinary system (the same professor); diseases of eye, ear and laryngology; physiology and chemistry (the same professor); histology and microscopical anatomy; hernia and dermatology (the same professor); and medical jurisprudence.

**REQUIREMENTS:** For admission, (1) eighteen years of age; (2) a good moral character; (3) a "preliminary education and training sufficient to enable him to profitably and properly engage in the study of medicine."—For graduation: (1) a good moral character; (2) twenty-one years of age; (3) two full courses of lectures; (4) satisfactory examination on all branches taught in the college.

**FEES:** Matriculation, \$5; demonstrator, \$5; lectures, \$30; graduation, \$20.

**STUDENTS:** Session of 1882-83, matriculates, 18; graduates, 11. Percent. of graduates to matriculates, *sixty-one*.

**REMARKS:** The following extracts from the last annual announcement are necessary to a better understanding of the matter given above, under the caption "Course of Instruction":

The faculty "is composed of gentlemen of culture from every school of medicine that is recognized for its merits."

The branches of "materia medica, embracing allopathic and homeopathic and eclectic," will be taught, &c., and the "physiological action of drugs"—presumably in the three methods—"will be practically demonstrated," &c.

The professor of diseases of the eye and ear in the faculty of 1882-83, was one of the graduates in the class of that year, and is announced as "professor of diseases of eye, ear and laryngology," in the faculty of 1883-84.

The "professor of homeopathic therapeutics and materia medica and theory and practice," and the demonstrator of anatomy, in the faculty of 1883-84, are also graduates of the class of 1882-83.

**MONTANA.**

Population, 39 159. Number of physicians, 77. Number of inhabitants to each physician, 568.

Dr. C. G. BROWN, of Helena, writes:

In reply to your letter, I will say that medical laws in Montana are like angels' visits, "few and far between." Each physician is required to pay a yearly license of \$16, and there is a law which says only M. D.'s shall receive a license, but there is no one to enforce it. Any one who applies to the county treasurer, says he has graduated, and "produces" \$16, gets his credentials, and enters into the "free-for-all."

We need a territorial board to regulate things. An effort was made, at the last session of the Legislature, to secure such a board, a medical practice act, etc.; but, alas, we were accused of trying to get a corner on the practice of medicine, and the result was a failure. We hope to accomplish more at the next session.

A bill was passed at the last session, establishing county boards with power to take care of contagious diseases, etc., but nothing touching the rights of practitioners, of whatever type or creed. I believe there is not a medical society in Montana, and there seems to be very little desire for mutual improvement.

**NEBRASKA.**

Population, 452 402. Number of physicians, 878 (this number was reported to the State medical society in 1882). Number of inhabitants to each physician, 521.

AN ACT to Regulate the Practice of Medicine in the State of Nebraska.

Be it enacted by the Legislature of the State of Nebraska:

**SECTION 1.** It shall be unlawful for any person to practice medicine, surgery or obstetrics, or any of the branches thereof, in this State, without first having complied with the



provisions of this act relating to registration; and no person practicing medicine, surgery or obstetrics, or any part of the branches thereof, shall be entitled to registration unless possessed of the qualifications required by section 4 of this act.

§ 2. It shall be the duty of all persons claiming to be physicians and surgeons, and intending to practice medicine, surgery or obstetrics in the State of Nebraska, before beginning the practice thereof, or any of the branches thereof, to register as a physician, by filing with the county clerk of the county in which he or she resides, or in which he or she intends to practice, a statement, in writing, under oath or affirmation, giving his or her full name, age, place of birth, place of residence, place of business, and the time he or she has practiced medicine, and when and where he or she has so practiced, and the time of such practice in each place, and if he or she is or has been a member of any medical society or societies, the name and location of such society or societies, and if he or she is a graduate of any medical college or university. Such statement shall be filed by the county clerk, and by him recorded in a book to be kept for that purpose, to be called the "Physicians' Register."

§ 3. Whoever shall knowingly make any false statement or statements in the statement mentioned in sec. 2 of this act, shall be deemed guilty of a felony, and, upon conviction thereof, shall be subject to the same penalties which attach to the crime of perjury under the laws of the State of Nebraska.

§ 4. [An amendment to the original act passed in February, 1883.] No person shall be entitled to registration as a physician or surgeon under the provisions of this act, or to practice medicine, surgery or obstetrics, or any branch thereof, in this State, unless he or she shall be possessed of one of the qualifications named in this section, as follows:

First, a graduate of a legally chartered medical college or institution having authority to grant the degree of Doctor of Medicine; or,

Second, Persons who can show evidence that they have passed a satisfactory examination before medical boards of other States created for the purpose of such examination, and all surgeons and assistant surgeons who were commissioned and served as such in the late war of the rebellion; or,

Third, A person who shall have, at the time this act takes effect, attended one course of lectures in a legally chartered medical college or institution having authority to confer the degree of Doctor of Medicine, and practiced medicine continually for three (3) years, the last one year of which practice shall have been in this State; or,

Fourth, A person who shall have been, at the time of the taking effect of this act engaged in the practice of medicine, surgery or obstetrics for a livelihood, for a period of ten years, the last two years of which practice has been in this State: *Provided*, that no person not a resident of this State at the time this act takes effect, who has not received the degree of Doctor of Medicine from a legally chartered medical college or institution having authority to grant the same, shall be admitted to registration under this act, or authorized to practice medicine, surgery or obstetrics in this State.

§ 5. It shall be the duty of the county clerk in each county of this State to provide, and keep in his said office as a public record, a book, to be entitled "The Physicians' Register," in which book the clerk shall record the statement named in section two of this act, and properly index the same, and for filing, recording and making transcripts of such statements, the clerk shall be entitled to the same fees as allowed by law for like services as to conveyances of real estate.

§ 6. Any person who shall have filed the statement required by section two of this act, in one county, and shall remove to another county, shall, before entering upon the practice of his profession in such last-named county, procure a certified copy of the record of his former registry, and cause such transcript to be filed and recorded in the physicians' register of such county in which he has removed.

§ 7. Certified copies of the record of such statements or transcripts shall be received in evidence in all courts instead of the original statement filed with the county clerk.

§ 8. No person shall recover, in any court of this State, any sum of money whatever for any medical, surgical or obstetrical services, unless he shall have complied with the provisions of this act relating to registration, and is one of the persons authorized by this act to be registered as a physician.

§ 9. Any person, not possessing the qualifications for the practice of medicine, surgery or obstetrics required by the provisions of section four of this act, or any person who has not complied with the provisions of section two of this act as to registration, who shall engage in the practice of medicine, surgery or obstetrics, or any of the branches thereof, in this State, shall be deemed guilty of a misdemeanor, and, on conviction thereof, shall be fined in any sum not less than twenty dollars nor more than one hundred dollars, and costs of prosecution, for each offense, and shall stand committed until such fine and costs are paid.

§ 10. A person shall be regarded as practicing medicine, within the meaning of this act, who shall publicly profess to be a physician, surgeon or obstetrician, or prescribe for the sick. But nothing in this act shall be construed to prohibit students from practicing under the supervision of a registered preceptor, or to prohibit gratuitous services in cases of emergency, and this act shall not apply to commissioned surgeons in the United States army and navy.

§ 11. Any itinerant vender, who is not qualified as hereinbefore provided, of any drug, nostrum, ointment or appliance of any kind, intended for the treatment of any disease or injury, or shall, by writing, printing or any other method except by ordinary professional card or sign, publicly profess to cure or heal disease, injury or deformity, by any drug or nostrum, shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be fined not less than fifty dollars nor more than one hundred dollars, or be imprisoned in the county jail for a period of not less than thirty days nor more than three months, or both, in the discretion of the court, for each offense.

Approved March 3, 1881. Took effect June 1, 1881.

A. S. V. MANSFELDE, M. D., Secretary of the Nebraska State Medical Society, writes: "Physicians generally have registered, but otherwise the law is not enforced."

A committee of the State Medical Society reported (1882) as follows:

"The law has had a good effect, in that it is now possible to learn what are the qualifications of so large a number of medical practitioners in the State, and yet your committee are compelled to report that the law is virtually a failure, so far as affording protection to the people from the imposition of quacks.

"From the fact that there is no tribunal before which may be determined the genuineness of a diploma or license, all kinds of papers purporting to be diplomas are spread upon our record books, and the people, for whose protection the law was intended, not being able to discriminate between the true and the false, are thus cruelly deceived by a so-called doctor, holding a diploma issued by some quack in Cincinnati, St. Louis, or elsewhere.

"Your committee direct especial attention to the large number of fraudulent diplomas found, and earnestly request that some action be taken by which the State may be freed of these imposters."

The act was amended after the writing of this report, but as the recommendation of the society that a tribunal should be appointed which should determine the genuineness of diplomas, was not heeded, the law, doubtless, remains inoperative as before.

#### OMAHA MEDICAL COLLEGE.

Omaha, Neb. (Pop., 30,518.)

Organized in 1881. The outgrowth of a preparatory school, established in 1880, under the name of the Nebraska School of Medicine.—The faculty embraces fourteen professors and a demonstrator.

**COURSE OF INSTRUCTION:** One annual course of twenty-two weeks' duration.—Students not attending regularly, or leaving before the close of the session, are catalogued as partial-course students. Three years' graded course recommended but not required. Daily examinations by the faculty.—Lectures embrace anatomy, physiology, chemistry, materia medica, clinical surgery, obstetrics, diseases of women, diseases of children, practice of medicine, principles and practice of surgery, therapeutics, mental and nervous diseases, medical jurisprudence, histology, pathology, ophthalmology, otology, laryngology.

**REQUIREMENTS:** For admission, (a) satisfactory evidence of good moral character; (b) eighteen years of age; (c) "creditable English education."—For graduation: (1) twenty-one years of age; (2) good moral character; (3) "such preliminary education as is clearly requisite for a proper standing with the public and the profession;" (4) three years' study; (5) two full courses; (6) clinical instruction for one session; (7) practical anatomy and chemistry, one course; (8) full and satisfactory written and oral examination on each branch taught; (9) thesis.

**FEES:** Matriculation, \$5; demonstrator, \$10; lectures, \$35; graduation, \$25.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1881-82	33	8	23
1882-83	30	9	30

Average percent. of graduates to matriculates during the past two years, *twenty-six*.

**REMARKS:** Six partial-course students are counted among the matriculates of 1881-82, and five among the matriculates of 1882-83.

#### MEDICAL DEPARTMENT OF THE UNIVERSITY OF NEBRASKA.

Lincoln, Neb. (Pop. 13,003.)

Organized in 1883.—The faculty embraces eight professors and one demonstrator.

**COURSE OF INSTRUCTION:** One course of lectures of twenty-four weeks' duration annually. Clinical teaching, practice in diagnosis, daily examinations and chemical and microscopical manipulations will occupy a prominent position in the course of instruction.—Lectures embrace descriptive and surgical anatomy, physiology, chemistry, materia medica, therapeutics, principles and practice of medicine, surgery, surgical pathology, obstetrics, gynecology, diseases of children, ophthalmology, otology, and medical jurisprudence.

**REQUIREMENTS:** For admission: "No one will be admitted to this department unless the faculty is satisfied that he is sufficiently advanced in an English education to pursue, with advantage, the study of medicine."—For graduation: (1) twenty-one years of age; (2) good moral character; (3) "must pursue successfully the study of practical anatomy and practical chemistry;" (4) three full courses of lectures; (5) satisfactory examination in all the branches taught.

**FEES:** None.

**NEVADA.**

Population, 62,266. Number of physicians, 134. Number of inhabitants to each physician, 464.

**AN ACT to Prevent the Practice of Medicine and Surgery by Unqualified Persons.**

The People of the State of Nevada, represented in Senate and Assembly, do enact as follows:

**SECTION 1.** No person shall practice medicine or surgery in this State who has not received a medical education and a diploma from some regularly chartered medical school; said school to have a *bona fide* existence at the time when said diploma was granted.

§ 2. Every physician or surgeon, when about to take up his residence in this State, or who now resides here, shall file for record with the county recorder of the county in which he is about to practice his profession, or where he now practices it, a copy of his diploma, at the same time exhibiting the original, or a certificate from the dean of the medical school of which he is a graduate, certifying to his graduation.

§ 3. Every physician or surgeon, when filing a copy of his diploma or certificate of graduation, as required by section two of this act, shall be identified as the person named in the papers about to be filed, either by affidavit of two citizens of the county, or by his affidavit taken before a notary public or commissioner of deeds for this State, which affidavit shall be filed in the office of the county recorder.

§ 4. Any person practicing medicine or surgery in this State without complying with sections one, two and three of this act, shall be punished by a fine of not less than fifty dollars (\$50), nor more than five hundred dollars (\$500), or by imprisonment in the county jail for a period of not less than thirty (30) days nor more than six (6) months, or by both fine and imprisonment, for each and every offense; and any person filing or attempting to file, as his own, the diploma or certificate of graduation of another, or a forged affidavit of identification, shall be guilty of a felony, and, upon conviction, shall be subject to such fine and imprisonment as is made and provided by the statutes of this State for said offense.

§ 5. It shall be the duty of the police, sheriff or constable to arrest all persons practicing medicine or surgery in this State who have not complied with the provisions of this act, and the officer making the arrest shall be entitled to one-half of the fine collected.

§ 6. No portion of this act shall apply to any person who, in an emergency, may prescribe or give advice in medicine or surgery in a township where no physician resides, or where no physician resides within convenient distance; nor to those who have practiced medicine and surgery in this State for a period of ten years next preceding the passage of this act, nor to persons prescribing in their own family.

§ 7. This act shall go into force sixty (60) days after its final passage.

Approved January 28, 1875.

The following supreme court decisions relating to the above act are given in the digest of Nevada Reports and Lawyer's Circuit Court Reports (page 297, 1878.)

**PHYSICIANS AND SURGEONS.**

1. Act to prevent the practice of medicine and surgery by unqualified persons constitutional. In construing section 6 of said act, which provides that it shall not apply "to those who have practiced medicine or surgery in this State for a period of ten years next preceding the passage of this act," held that said provision is not in violation of section 21 of art iv. of the State constitution. 10 Nev. 323.

2. *Idem*—How far constitutional. Held, that there is some reason for requiring ten years' practice in this State as a qualification for the continued practice of medicine and surgery; but there is no sort of reason for requiring that practice to have extended over the particular ten years *immediately* preceding the enactment of the law, and to this extent the law is unconstitutional, because in violation of the fourteenth amendment to the federal constitution; but omitting the words "next preceding the passage of this act," leaves a good and perfect statute: (By Beatty, J.)

3. *Idem*. Held, that said section is not in conflict with any of the provisions of the State or federal constitution: (By Hawley, C. J.)

**NEW HAMPSHIRE.**

Population, 346,991. Number of physicians, 610. Number of inhabitants to each physician, 567.

**GENERAL LAWS Relating to the Practice of Medicine, Surgery and Dentistry.**

**CHAPTER 132. SECTION 1.** It shall not be lawful for any person to practice medicine, surgery or midwifery unless such person shall have obtained a license from some medical society organized under the laws of this State, stating that he is qualified in the branches of the medical profession named in said license.



§ 2. Every medical society, organized under the laws of this State, shall, at such time and in such manner as may be prescribed in its charter or by-laws, elect a board of censors, consisting of three members, who shall be elected for such term as may be prescribed in said charter or by-laws, which board shall have authority to examine and license persons to practice medicine, surgery or midwifery. The board shall issue licenses without examination to all persons who furnish evidence by diploma from some medical school authorized to confer degrees in medicine and surgery, when said board is satisfied that the person presenting such diploma has obtained it after pursuing some prescribed course of study and upon due examination. Said board shall also have power, upon due notice and hearing, to revoke any license granted by said board when improperly obtained, or when the holder has, by conviction for crime, or any other cause, ceased to be worthy of public confidence. Such license or revocation shall be recorded by the clerk of said medical society.

§ 3. It shall not be lawful for any person, who is not duly authorized to practice medicine or surgery, to practice dentistry unless such person has received a dental degree from some college, university or medical school authorized to confer the same, or shall have obtained a license from the New Hampshire dental society.

§ 4. Said dental society shall, at such time and in such manner as may be prescribed in its charter or by-laws, elect a board of censors, consisting of three members, who shall be elected for such term as may be prescribed by the society, which board shall have authority to examine and license persons to practice dentistry. The license shall be recorded by the clerk of said society.

§ 5. No person receiving a license as herein provided shall be authorized to practice until he shall have procured the same to be recorded by the clerk of the court in the county where he resides, if a resident of this State; if not a resident of this State, in the county where he intends to practice. Such licenses shall be recorded in a book provided for that purpose, and which shall bear the title and inscription of the medical and dental register of ..... county, and the fee for recording the same shall be fifty cents.

§ 6. Each person receiving a license upon examination shall pay, for the use of the society granting the same, the sum of five dollars; upon diploma, one dollar.

§ 7. If any person shall practice medicine, surgery, midwifery or dentistry without being duly authorized as provided in this chapter, or after his license is revoked, he shall be punished by fine of not more than three hundred dollars for each offense.

§ 8. The provisions of the preceding sections shall not apply to persons who have resided and practiced their profession in the town or city of their present residence during all the time since January first, eighteen hundred and seventy-five, nor to physicians residing out of the State, when called into the State for consultation with duly licensed physicians, or to attend upon patients in the regular course of their business.

Dr. IRVING A. WATSON, Secretary of the New Hampshire State board of health, writes: While the medical act now in force in this State is not all that can be desired, it has done a great deal of good, especially in reducing the number of traveling quacks. At the time of its enactment, it sent a good many uneducated practitioners out of the State, and has undoubtedly kept many of that class from locating in the State. Several attempts have been made to repeal it by Boston quacks, in order to operate in this State, but they have, in every instance, been unsuccessful.

#### MEDICAL DEPARTMENT OF DARTMOUTH COLLEGE.

(*New Hampshire Medical Institute.*)

Hanover. (Pop. 1134.)

Organized in 1797. The first class was graduated in 1798. Classes have been graduated each subsequent year.—The faculty embraces eleven professors, one lecturer, and an instructor.

**COURSE OF INSTRUCTION:** One regular course of sixteen weeks' duration, one recitation course of twenty-four weeks' duration, annually. "Clinical instruction will be given to as large an extent as circumstances will admit."—Lectures as follows: The courses in chemistry, surgery and practice consist of sixty-six lectures each; in anatomy and physiology, ninety-nine lectures; in obstetrics and therapeutics, forty-four lectures each; in gynecology, of twenty-two lectures; shorter courses in medical jurisprudence, mental diseases, ophthalmology, laryngology, pharmacy, urinary analysis.

**REQUIREMENTS:** For admission, applicants must be eighteen years of age, and, unless already matriculates in medicine or graduates of some reputable college, academy or high school, will be examined as to their fitness for entering upon and appreciating the technical study of medicine. They will be expected to be familiar with the elementary principles of physics (light, heat, electricity, etc.), on entrance.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) two full courses of lectures; (4) three full years' study; (5) one course of dissection. Two examinations annually.

**FEES:** Matriculation \$5; lectures, \$77; graduation, \$25; recitation term, \$40.



STUDENTS: Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1878	87	30	34.5
1879	88	23	26.0
1880	80	29	32.5
1881	78	29	37
1882	91	43	47.2
1883	76	28	36.8

Average percent. of graduates to matriculates during the past six years, *thirty-five*.

Number of Illinois students attending during the past session, 1.

Number of graduates in Illinois, 22.

## NEW JERSEY.

Population, 1 131 116. Number of physicians, 1595. Number of inhabitants to each physician, 709.

AN ACT to Regulate the Practice of Medicine and Surgery.

Be it enacted by the Senate and General Assembly of the State of New Jersey:

SECTION 1. That every person practicing medicine or surgery in this State, in any of their branches, for gain, or who shall receive or accept for his or her services any fee or reward, either directly or indirectly, shall be a graduate of some legally chartered medical college or university in good standing, or some medical society having power by law to grant diplomas; and such person before entering upon said practice shall deposit a copy of his or her diploma, with the clerk of the county in which he or she may sojourn or reside, and shall pay said clerk ten cents for filing the same in his office; said copy to be a matter of record, and open to public inspection.

§ 2. That any person who shall practice medicine or surgery without conforming to the requirements of the first section of this act, shall be deemed guilty of a misdemeanor, and, on conviction, shall be punished by a fine of twenty-five dollars, or imprisonment in the county jail not exceeding six months, or both, at the discretion of the court, for each prescription made, operation performed, or professional service rendered: *Provided*, that any person who shall have had twenty years' experience in the practice of medicine and surgery in one locality, shall be exempt from the provisions of this act.

§ 3. That it shall be unlawful for any person, not qualified according to the first section of this act, to collect any fees for medical or surgical services.

§ 4. That any person who shall offer for record a copy of any diploma which shall have been issued to any other person, or a diploma issued or obtained fraudulently, shall be deemed guilty of a high misdemeanor, and on conviction thereof, shall be punished by a fine of not less than three hundred dollars nor more than five hundred dollars, or imprisonment at hard labor for not less than one nor more than three years, or both, at the discretion of the court.

§ 5. That nothing in this act shall be so construed as to prevent any physician or surgeon in good standing, and legally qualified to practice medicine or surgery in the State in which he or she resides, from practicing in this State; but all persons opening any office, or appointing any place where he or she may meet patients or receive calls, shall be deemed a sojourner in this State, and shall conform to the first section of this act.

§ 6. That this act shall take effect on the first day of June, one thousand eight hundred and eighty.

Original act, approved March 12, 1880. The second section, as given, being an amendment to the original act, was approved March 2, 1881.

The following supplement was approved March 17, 1882:

That any physician residing and practicing medicine and surgery in this State, and being a graduate of a regularly chartered medical college or university having the power to grant diplomas, who within one year after the passage of the act to which this is a supplement, shall have deposited a copy of his or her diploma with the clerk of the county, as required by said act, shall not be liable to any of the fines or penalties prescribed by said act, for failure to comply with the terms thereof.

## MEDICAL SOCIETY OF NEW JERSEY.

Organized in 1775. The society does not give instruction. It was authorized to confer the degree of M. D. in 1866. The section of the act to reorganize the Medical Society of New Jersey and conferring this power, is as follows: "And be it enacted, that the society shall have the authority to confer the degree of M. D., under such rules and regulations as they may adopt, which degree shall be deemed sufficient evidence of a regularly educated and qualified practitioner of the healing art."

Regulations of the society concerning the conferring of the degree of Doctor of Medicine and honorary membership:

**SECTION 1.** Candidates for the degree of *médicinæ doctor*, may apply to any district society of this State, and shall be admitted to examination under the following rules and regulations:

1st. Each district society shall appoint annually, or *pro re nata*, a committee of not less than five members, who shall conduct the examination.

2d. All examinations shall be in the presence of the society at a regular meeting; and no candidate shall be examined until he has given satisfactory evidence of having reached the age of twenty-one years; is of good moral character; and has pursued his medical studies under the care of some regular practitioner for the term of three years; including two courses of lectures in some medical institution in affiliation with the American Medical Association. If he has not graduated at some academic college, then the society shall be satisfied that his preliminary education has been such as to qualify him for the study and practice of medicine.

3d. The examination shall extend to all the branches taught in the medical schools recognized as aforesaid; and the candidate shall then be balloted for by the society; and if he shall receive the approving votes of two-thirds of all the members present, the presiding officer shall give a certificate to that effect to the candidate.

4th. This certificate may be presented at the next or any subsequent regular meeting of this society, not extending beyond the period of three years, with a written thesis upon some medical subject; and if upon a ballot they shall be approved by a majority of the members present, the candidate, upon the payment of fifteen dollars, shall be entitled to receive a diploma.

The honorary degree of M. D., may be conferred by the society, by a vote by ballot of three-fourths of the members present; provided, the nomination shall have been made at a preceding meeting, and provided the candidate has been a regular practitioner for the period of seven years.

§ 2. Practitioners of medicine of this or any other State may be admitted as honorary members by a vote by ballot of the society, provided that the nominations be made at a previous meeting. The nomination shall be referred to a special committee of three appointed by the president, and the nominee shall not be considered as eligible to election till the committee report. The privilege of honorary membership shall not confer the right to vote.

**GRADUATES:** Eight or ten diplomas have been conferred. Two were conferred in 1881, and one at the last meeting of the society in 1883.

#### LIVINGSTON UNIVERSITY OF HADDONFIELD, NEW JERSEY.

See List of Institutions not recognized by the ILLINOIS STATE BOARD OF HEALTH.  
A Buchanan institution, which was fraudulent and is now extinct.

#### HYGEO-THERAPEUTIC COLLEGE, BERGEN HEIGHTS, NEW JERSEY.

See List of Institutions not recognized by the ILLINOIS STATE BOARD OF HEALTH.

### NEW MEXICO.

Population, 119,565. Number of physicians, 80. Number of inhabitants to each physician, 1494.

**AN ACT to Protect the Public Health and Regulate the Practice of Medicine in the Territory of New Mexico.**

Be it enacted by the Legislative Assembly of the Territory of New Mexico:

**SECTION 1.** That a territorial board of medical examiners is hereby established, which shall be composed of seven practicing physicians of known ability and integrity, who are graduates of some medical school, college or university duly established under and by virtue of the laws of the country in which such medical school, college or university is situated, giving each of the three schools or systems of medicine the following representation, to-wit: The allopathic school, or system of medicine, four members; the homeopathic school, or system, two members; the eclectic school, or system of medicine, one member.

§ 2. The Governor shall, as soon as practicable after the passage of this act, appoint a territorial board of medical examiners, as provided for in the preceding section, who shall hold their offices for two years from and after their appointment, and until their successors shall have been appointed and qualified. Thereafter the Governor shall appoint, every two years, a like board as hereinbefore described, and he shall also fill all vacancies that may occur as soon as practicable after having been notified of the existence of such vacancy by the secretary of the board: *Provided*, that in making biennial

appointments or filling vacancies, the representation of the medical schools shall not be changed from the original basis, as in section 1 of this act. The board of examiners so appointed shall go before a county judge and make oath that they are regular graduates or licentiates, and that they will faithfully perform the duties of their offices.

§ 3. The territorial board of examiners shall organize within three months after the passage of this act. They shall procure a seal, and shall receive through their secretary applications for certificates and examinations. The president of such board shall have authority to administer oaths, and the board to take testimony in all matters relating to their duties. They shall issue certificates to all who furnish satisfactory proof of having received diplomas or licenses from legally chartered medical institutions in good standing; they shall prepare two forms of certificates, one for persons in possession of diplomas or licenses, the other for candidates examined by the board. In selecting places to hold their meetings, they shall, as far as reasonable, accommodate applicants residing in different sections of the territory, and due notice shall be published of all their meetings. Certificates shall be signed by all the members of the board granting them and by the president of the board, upon a recommendation of a majority thereof.

§ 4. Said territorial board of examiners shall examine diplomas as to their genuineness, and if the diplomas shall be found genuine, as represented, the secretary of the board of examiners shall receive a fee of five (\$5) dollars from each graduate or licentiate, and no further charge shall be made to the applicant; but if it be found to be fraudulent, or not lawfully owned by the possessor, the board shall be entitled to charge and collect twenty dollars of the applicant presenting such diploma. The verification of the diploma shall consist in the affidavit of the holder and applicant that he is the lawful possessor of the same, and that he is the person therein named. Such affidavit may be taken before any person authorized to administer oaths, and the same shall be attested under the hand and official seal of said officer, if he has a seal. Graduates may present their diplomas and affidavits, as provided by this act, by letter or by proxy, and the board of examiners shall issue its certificate the same as though the owner of the diploma were present.

§ 5. All examinations of persons not graduates or licentiates shall be made directly by the board, and the certificates given by a majority of the board shall authorize the possessor to practice medicine and surgery in the territory of New Mexico.

§ 6. Every person holding a certificate from a board of examiners, shall have it recorded in the county clerk's office in every county in which he practices, or attempts to practice, medicine or surgery, in a book kept by the clerk for that purpose, which shall be known as the certificate book of physicians and surgeons.

§ 7. When the certificate is filed by the clerk, he shall record the same and attach his certificate thereto, which shall show the date of filing and recording, and the number of the book and page of the record, and shall keep an alphabetical index of the names of all physicians so filing their certificates, and he shall be allowed the same fees as now allowed for similar services.

§ 8. Candidates for examination shall pay a fee in advance of ten dollars to the secretary.

§ 9. All examinations of persons not graduates shall be made directly by the territorial board of examiners. Examinations may be made, in whole or in part, in writing, and the subjects of examinations shall be as follows, to-wit: Anatomy, physiology, chemistry, pathology, surgery, obstetrics, and practice of medicine (exclusive of materia medica and therapeutics).

§ 10. The territorial board of examiners may refuse certificates to individuals guilty of unprofessional or dishonorable conduct, and they may revoke certificates for like causes.

§ 11. Any person shall be regarded as practicing medicine within the meaning of this act who shall profess publicly to be a physician and to prescribe for the sick, or who shall append to his name the letters "M. D." But nothing in this act shall be construed to prohibit students from prescribing under the supervision of preceptors, or to prevent women from practicing midwifery, or to prohibit gratuitous services in cases of emergency, and this act shall not apply to commissioned surgeons or acting surgeons of the United States army and navy.

§ 12. Any person practicing medicine or surgery in this Territory, without complying with the provisions of this act, shall be punished by a fine of not less than fifty dollars, nor more than five hundred dollars, for each and every offense; and any person filing, or attempting to file, as his own, the diploma or certificate of another, or a forged affidavit of identification, shall be guilty of a felony, and upon conviction shall be subject to such fine and imprisonment as are made and provided by the statutes of this territory for the crime of forgery, but the penalties shall not be enforced until on and after the thirtieth day of June, eighteen hundred and eighty-two: *Provided*, that the provisions of this act shall not apply to those who have been practicing medicine ten years within this Territory.

§ 13. The code of ethics of the American Medical Association shall be the standard and rule of decision concerning professional conduct of members of the medical profession for the purposes of this act.

§ 14. A majority of the members of the medical board created by this act, when qualified according to the provisions of this act, are authorized and empowered to exercise all the powers and perform all the duties authorized and required of such board by the provisions of this act.

§ 15. It shall be the duty of the attorney general and district attorneys to prosecute any and all persons who shall be guilty of violating any of its provisions.



§ 16. Any person who shall unlawfully collect or receive any fee or compensation for services as physicians or surgeon, in violation of the provisions of this act, shall be liable to the party from whom the same shall be collected or received in double the amount thereof, to be collected by an action in debt.

§ 17. This act shall take effect and be in force from and after the date of its passage and approval.

Approved March 2, 1882.

DR. J. M. CUNNINGHAM, of Las Vegas, writes: I am inclined to think the law was a little premature for this Territory, from the fact that we have a great many small Mexican towns in the Territory, with populations ranging from two hundred to four hundred inhabitants, who occasionally need medical advice, but are unable to send to the larger towns, there being no physician of any particular ability who cares to live in these isolated localities; while the law prevents their former "make-shifts" from practicing. I know of no other Territory, unless it may be Arizona, where this objection may be urged with so much force as here.

## NEW YORK.

Population, 5 082 871. Number of physicians, 9272. Number of inhabitants to each physician, 548.

AN ACT to Regulate the Practice of Medicine and Surgery in the State of New York.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. A person shall not practice physic or surgery within the State unless he is twenty-one years of age, and either has been heretofore authorized so to do, pursuant to the laws in force at the time of his authorization, or is hereafter authorized so to do as prescribed by chapter seven hundred and forty-six of the laws of eighteen hundred and seventy-two, or by subsequent sections of this act.

§ 2. Every person now lawfully engaged in the practice of physic and surgery within the State shall, on or before the first day of October, eighteen hundred and eighty, and every person hereafter duly authorized to practice physic and surgery shall, before commencing to practice, register in the clerk's office of the county where he is practicing, or intends to commence the practice of physic and surgery, in a book to be kept by said clerk, his name, residence and place of birth, together with his authority for so practicing physic and surgery as prescribed in this act. The person so registering shall subscribe and verify by oath or affirmation, before a person duly qualified to administer oaths under the laws of the State, an affidavit containing such facts, and whether such authority is by diploma or license, and the date of the same and by whom granted, which, if willfully false, shall subject the affiant to conviction and punishment for perjury. The county clerk to receive a fee of twenty-five cents for such registration, to be paid by the person so registering.

§ 3. A person who violates either of the two preceding sections of this act, or who shall practice physic or surgery under cover of a diploma illegally obtained, shall be deemed to be guilty of a misdemeanor, and on conviction shall be punished by a fine of not less than fifty dollars nor more than two hundred dollars for the first offense, and for each subsequent offense by a fine of not less than one hundred dollars, nor more than five hundred dollars, or by imprisonment for not less than thirty nor more than ninety days, or both. The fine when collected shall be paid, the one-half to the person or corporation making the complaint, the other half into the county treasury.

§ 4. A person coming to the State from without the State may be licensed to practice physic and surgery, or either, within the State in the following manner: If he has a diploma conferring upon him the degree of doctor of medicine, issued by an incorporated university, medical college, or medical school without the State, he shall exhibit the same to the faculty of some incorporated medical college or medical school of this State, with satisfactory evidence of his good moral character, and such other evidence, if any, of his qualifications as a physician or surgeon, as said faculty may require. If his diploma and qualifications are approved by them, then they shall indorse said diploma, which shall make it for the purpose of his license to practice medicine and surgery within this State the same as if issued by them. The applicant shall pay to the dean of said faculty the sum of twenty dollars for such examination and indorsement. This indorsed diploma shall authorize him to practice physic and surgery within the State upon his complying with the provisions of section two of this act.

§ 5. The degree of doctor of medicine, lawfully conferred by any incorporated medical college or university in this State, shall be a license to practice physic and surgery within the State after the person to whom it is granted shall have complied with section two of this act.

§ 6. Nothing in this act shall apply to commissioned medical officers of the United States army or navy, or of the United States marine-hospital service. Nor shall it apply to any person who has practiced medicine and surgery for ten years last past, and who is



now pursuing the study of medicine and surgery in any legally incorporated medical college within this State, and who shall graduate from, and receive a diploma, within two years from the passage of this act.

§ 7. All acts, or parts of acts inconsistent with the provisions of this act are hereby repealed.

Passed May 29, 1889.

REMARKS: Dr. H. G. PIFFARD, of New York City, writes:

The New York law of 1889 is a good one. There is but one defect, namely, that perjury in registering is only a misdemeanor and punishable as such, and not a felony as it should and was intended to be. An intelligent lawyer can secure conviction in nearly every case he prosecutes. The law is of course not as good and as thorough as we would like; but it is as good as there is any prospect of having at present.

Dr. PIFFARD, in a series of articles which appeared in the New York Medical Journal, gives a history of medical legislation in New York, from which the following extracts are made:

The first law relating to the regulation of the practice of medicine in the State of New York, was passed in 1806, and amended 1807. In 1813, a new act was passed, and this was amended in 1818 and in 1819. These statutes, although unsatisfactory, seem to have been stepping stones to greater powers, for in 1827, the profession gained a definite and substantial victory, the medical act of that year placing in their hands the supreme control and regulation of the practice of medicine in this State. The suppression of quackery was in the hands of the county societies, each having jurisdiction in its own district. In 1842, a law was secured, by the efforts of homeopathic physicians, depriving the society of this power. This law, moreover, went further than this, as it repealed the penal clause of the act of 1827, and virtually permitted any who chose, educated or not, to practice medicine in this State. This permitted quacks of all sorts and descriptions to ply their vocations without fear of molestation.

By a law, enacted in 1866, the power of county societies to purge themselves of "irregular" practitioners was restored, giving them almost plenary powers in matters of discipline. The State medical society secured in 1880, the passage of a law reducing the number of bodies, competent to legitimize practitioners of medicine, from one hundred and fifty to thirteen. These thirteen bodies are the medical colleges of the State.\*

Prosecutions for violation of the law may be undertaken by individuals, or county societies. In New York county these prosecutions have been numerous, and mainly successful. Thus far but one flaw or serious imperfection in the law has been discovered—namely, that the penalty for perjury in connection with registration is not sufficiently severe. That the law is all that is to be desired, or that it is the best medical act in this country, is far from being claimed. In fact, I believe that Illinois and North Carolina have better ones both from a theoretical and practical standpoint.

#### COLLEGE OF PHYSICIANS AND SURGEONS IN THE CITY OF NEW YORK.

(Medical Department of Columbia College.)

New York City. (Pop. 1,206,299.)

Organized in 1807, by the regents of the university of the State of New York, as their medical department, under the name of the College of Physicians and Surgeons in the City of New York. The institution was connected with the Columbia College for a short period in 1814, and became permanently connected with it in 1860, when the medical department of Columbia College was added to the original title. The original medical department of Columbia College was organized in 1767; it was suspended during the war of the Revolution, and became extinct in 1813. The first class was graduated by this college in 1811. Classes have been graduated each subsequent year.—The faculty embraces nine professors, one adjunct professor, eight clinical professors and lecturers, four demonstrators, one assistant to a professor, and thirty clinical assistants.

**COURSE OF INSTRUCTION:** One regular course of twenty-eight weeks' duration annually. Clinics at hospitals and dispensaries; attendance optional and admission free. Recitations are held daily; attendance, optional; fees required, \$10. Three years' graded course recommended, but not required. The instruction at this college consists of didactic lectures, with demonstrations, clinical teaching, recitations, and practical teaching in subjects involving manipulation.—Lectures embrace, (1) anatomy; (2) physiology and hygiene; (3) physics, chemistry and medical jurisprudence; (4) materia medica and therapeutics; (5) obstetrics and the diseases of women and children; (6) surgery; (7) pathology and practical medicine, ophthalmology, otology, venereal diseases, mental and nervous diseases, laryngoscopy, dermatology. Attendance upon the above courses of lectures is a prerequisite for graduation.

**REQUIREMENTS:** For admission, none.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) three years' study; (4) two full courses; (5) satisfactory examination in seven branches: (8) thesis. The examinations for the degree of doctor of medicine are in writing, and are held twice a year, viz: (1) immediately after the close of the lectures of the college year in May; (2) during the second and third weeks of September. According to the merits of his thesis and examinations three results of the latter are possible in the case of a candidate for the degree of M.D.: 1. He is "passed" when his thesis and examinations have been satisfactory in each and all of the seven principal branches of medical teaching. 2. He is "conditioned" when the average merit of his thesis and examinations has been satisfactory, while in one or more branches he has

\*Now 1883, reduced to eleven in number.

been found deficient. In this case the candidate can proceed to his degree only on the condition that he first pass a re-examination in the deficient branch or branches, not sooner than at the next regular semi-annual examination. 3. He is "rejected" when the average merit of his thesis and examinations has been unsatisfactory; *in this case the candidate must be re-examined in all the seven branches*, but the writing of a new thesis is rarely required.

FEES: Matriculation, \$5; lectures, \$140; demonstrator, \$10; graduation, \$30.

Students: Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	413	109	27
1878-79	485	95	19.6
1879-80	513	117	22.8
1880-81	555	120	21.6
1881-82	547	115	21
1882-83	543	125	23

Average percent. of graduates to matriculates, during the past six years, *twenty-two*.

Number of Illinois students attending the last session, 8.

Number of graduates in Illinois, 50.

REMARKS: "An immense majority of the students of this college now take the three-years' graded course."

#### COLLEGE OF PHYSICIANS AND SURGEONS OF THE WESTERN DISTRICT OF NEW YORK.

Fairfield, N. Y.

Organized in 1812.—Extinct since 1840.—During its existence it afforded instruction to 3123 students, and graduated 589.

Number of graduates in Illinois, 9.

#### NEW MEDICAL INSTITUTION.

(*Medical Department of Queen's College, New Jersey.*)

New York City.

Organized in 1814.—Suspended in 1816.—In 1826 the medical institution was revived under the auspices of Rutgers (formerly Queen's) College, N. J., but became extinct in 1830. It is probable that the diplomas issued after its revival were illegal.

#### NEW YORK SCHOOL OF MEDICINE.

New York City.

Organized under the auspices of the New York County Medical Society in 1831.

#### AUBURN MEDICAL SCHOOL.

Auburn, N. Y.

Extinct.—Date of organization and extinction unknown.

#### GENEVA MEDICAL COLLEGE.

Geneva, N. Y.

Organized in 1839.—Extinct. Merged into the College of Medicine of Syracuse University in 1872 (*vide infra*.)

Number of graduates in Illinois, 17.

#### ALBANY MEDICAL COLLEGE.

(*Medical Department, Union University.*)

Albany, N. Y. (Pop. 90 758.)

—Organized in 1839. The first class graduated in 1840. It became connected with Union University in 1873, when the present title was assumed.—The faculty embraces twelve professors, two adjunct professors, a demonstrator of anatomy, a lecturer and a curator.

**COURSE OF INSTRUCTION:** One regular session of twenty-three weeks' duration annually. Written examinations are held monthly; clinics at hospital and dispensary: three years' graded course recommended, but not required.—Lectures embrace anatomy, histology, pathological anatomy, physiology, materia medica, therapeutics, diseases of the throat, chemical philosophy, chemistry, theory and practice of medicine, clinical medicine, medical jurisprudence, hygiene, psychological medicine, diseases of nervous system, fractures and dislocations, principles and practice of surgery, surgical pathology, operative surgery, dermatology, ophthalmology, otology, obstetrics, diseases of women.

**REQUIREMENTS:** For admission: (a) graduates from recognized colleges, scientific schools or medical institutions, and (b) students presenting certificates of competency from the censors of the medical society of the county from which they come, will be required to pass the preliminary examination on joining the school; (c) all others will be required to pass examinations by a page written at the time, of which the orthography, grammatical construction and penmanship will be considered, and in arithmetic, grammar, geography and elementary physics.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) three years' study; (4) "three years' graded course in this college, or the equivalent of the first two courses elsewhere, and the last in the college;" (5) thesis; (6) "satisfactory examination in the several branches of medicine and surgery." Final examinations conducted chiefly in writing, and are intended to be thorough, but just to the student. Regular and punctual attendance is required.

**FEES:** Matriculation, \$5; lectures, \$100; demonstrator, \$10; graduation, \$25; laboratory, \$10.

**STUDENTS:** Number of matriculates and graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	153	31	20.2
1878-79	161	43	26.7
1879-80	178	46	25.8
1880-81	172	58	33.7
1881-82	170	54	31.7
1882-83	157	51	32.5

Average percent. of graduates to matriculates during the past six years, *twenty-eight*.

Number of graduates in Illinois, 38.

#### MEDICAL DEPARTMENT OF THE UNIVERSITY OF THE CITY OF NEW YORK.

(University Medical College.)

New York City.

Organized in 1841. The first class was graduated in 1842. Classes have been graduated in each subsequent year.—The faculty embraces thirteen professors, one demonstrator, one curator, six lecturers, ten laboratory instructors and twenty clinical assistants.

**COURSE OF INSTRUCTION:** A preliminary winter session of two weeks' duration, a regular winter session of twenty-one weeks' duration, and a spring session, almost exclusively clinical, of ten weeks' duration, annually. The instruction consists of didactic and clinical lectures, daily faculty examinations, and practical demonstration of subjects by manipulation.—Lectures embrace physiology, histology, otology, pathology, practice of medicine, materia medica, therapeutics, diseases of the nervous system, surgery, clinical surgery, obstetrics, diseases of women and children, surgical pathology, surgical anatomy, medical jurisprudence, diseases of the mind, physiological chemistry, ophthalmology, orthopedic surgery, chemistry, medical botany, hygiene, dermatology and laryngology.

**REQUIREMENTS:** For admission, none.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) "two winter sessions of lectures;" (4) three years' study; (5) one course of practical anatomy; (6) satisfactory written examinations on surgery, chemistry, practice of medicine, materia medica, anatomy, physiology, and obstetrics.—Rejected candidates will not be permitted to apply for a re-examination for one year. Honorary degrees are not granted. Two commencements take place annually, at either of which the candidates who have complied with the above requirements may graduate. The first is at the close of the winter; the second at the close of the spring session.

**FEES:** Matriculation, \$5; lectures, \$140; demonstrator, \$10; graduation, \$30; private instruction in practical branches, averaging \$12 per course.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and average percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	509	153	30
1878-79	556	204	36.7
1879-80	609	205	33.6
1880-81	623	200	32.1
1881-82	575	213	37
1882-83	528	163	30.8

Average percent. of graduates to matriculates during the past six years, *thirty-three*.

Number of Illinois students attending the last session, 3.

Number of graduates in Illinois, 80.

**REMARKS:** "The design of the faculty is to make the spring session a prominent feature, with a view of its becoming *ultimately* as much a necessity as the winter session is now."

## MEDICAL DEPARTMENT OF THE UNIVERSITY OF BUFFALO.

Buffalo, N. Y. (Pop., 155 134.)

Organized in 1846. The first class was graduated in 1847; classes have been graduated each subsequent year.—The faculty embraces, six professors, five lecturers, two clinical lecturers, and a demonstrator of anatomy.

**COURSE OF INSTRUCTION:** One regular term of twenty-one weeks' duration. Three years' graded course recommended, but not required. The course of instruction includes didactic and clinical teaching, with systematic recitations and special instruction.—Lectures embrace principles and practice of medicine, clinical medicine, principles and practice of surgery, clinical surgery, physiology, microscopy, operative surgery, materia medica, hygiene, anatomy, obstetrics, gynecology, chemistry, toxicology, mental diseases, ophthalmology, otology, dermatology, syphilis, histology, and pathology. Personal instruction in practical branches, for which a fee averaging \$10 is charged.

**REQUIREMENTS:** For admission, "a certificate from the student's preceptor of his moral character, and that he is duly entered, and properly qualified to study medicine, must be presented, on matriculating. The responsibility of sufficient preliminary education, rests of necessity with the private instructor."—For graduation: (1) twenty-one years of age; (2) good moral character; (3) three years' study; (4) dissection during one course; (5) two full courses of lectures; (6) satisfactory examination in the several departments; (7) thesis.

**FEES:** Matriculation, \$5; lectures, \$100; demonstrator, \$5; graduation, \$25.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	114	42	36.8
1878-79	126	40	31.7
1879-80	138	53	38.3
1880-81	154	48	31.1
1881-82	172	65	37.8
1882-83	178	57	32.

Average percent. of graduates to matriculates during the past six years, *thirty-four*.

Number of graduates in Illinois, 26.

**REMARKS:** CHAS. CARY, M.D., Secretary, writes: "I desire to express my hearty approval of the action of the ILLINOIS STATE BOARD OF HEALTH; your efforts are certainly in the right direction, and will result in much good to the profession and general public. Until we have in New York State a board of examiners—which I sincerely hope is in the near future—or until the leading colleges take the initiative, we in Buffalo cannot very well establish matriculation examinations,—although we realize the fact that three out of ten students rejected last year, were rejected on account of deficient preliminary examination."

## NEW YORK MEDICAL COLLEGE.

New York City.

Organized in 1852. Extinct since 1857(?) Number of graduates in Illinois, 2.

## MEDICAL COLLEGE OF NEW YORK CITY.

New York City.

Extinct.

## EXCELSIOR MEDICAL COLLEGE.

New York City.

Extinct.

## METROPOLITAN MEDICAL COLLEGE.

New York City.

Extinct.

## SYRACUSE ECLECTIC MEDICAL COLLEGE.

Syracuse, N. Y.

Organized in 185-. Extinct. Number of graduates in Illinois, 2.



## ROCHESTER ECLECTIC MEDICAL COLLEGE.

Rochester, N. Y.

Organized in 1851.—Lectures delivered three or four sessions. Extinct.

## LONG ISLAND COLLEGE HOSPITAL.

Brooklyn, N. Y. (Pop., 566 633.)

Organized in 1860. The first class was graduated in 1861; classes have been graduated each subsequent year. The faculty embraces, ten professors, nine lecturers, one clinical lecturer and one demonstrator. During the reading term, twelve lecturers, one demonstrator (mostly professors and lecturers during the regular term) and ten clinical assistants, give instruction.

**COURSE OF INSTRUCTION:** One regular term, of nineteen weeks' duration, and one reading term, of eight weeks' duration, annually. Graded course, extending over nine months of two years, is recommended, but not required; fifty per cent. of the entire class have taken this course, for the last three years.—Lectures embrace, principles and practice of medicine, clinical medicine, chemistry, toxicology, anatomy, medical and surgical diseases of women, operative and clinical surgery, physiology, sanitary science, histology, general pathology, surgery, materia medica, therapeutics, obstetrics, diseases of children, ophthalmology, otology, dermatology, laryngology, nervous diseases, practical chemistry, genito-urinary diseases, physical diagnosis, diseases of the kidneys.

**REQUIREMENTS:** For admission: "The faculty earnestly desire to cooperate with the profession in securing a higher grade of preliminary education before students enter upon professional studies; but until some uniform grade is agreed upon by the leading colleges of the country, the responsibility of such qualifications must rest with the private instructor. For the purpose of testing the general literary qualifications of the students before graduation, frequent written examinations will be required, hereafter, throughout the whole course of instruction, and these examinations will enter into the graduation of the student, on his final examination." For graduation: (1) twenty-one years of age; (2) good moral character; (3) three years' study; (4) two full courses of lectures, not completed in the same twelve-month; (5) practical anatomy, to the extent of having dissected each region of the body; (6) one course of practical chemistry and urine analysis; one course in practical histology and pathology; (8) pass satisfactory examinations, both oral and written, in chemistry, histology, anatomy, physiology, materia medica, therapeutics, pathology, gynecology, obstetrics, surgery, and practice of medicine. But one examination each year.

**FEES:** Matriculation, \$5; demonstrator, \$5; chemical laboratory, \$5; pathological laboratory, \$5; lectures, \$100; reading term, \$40; graduation, \$250.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	120	40	33.3
1878-79	115	33	28.7
1879-80	118	43	36.5
1880-81	141	51	36.1
1881-82	159	61	38.3
1882-83	154	51	33.4

Average percent. of graduates to matriculates during the past six years, *thirty-four*.

Number of Illinois students attending the past session, 3.

Number of graduates in Illinois, 40.

## NEW YORK HOMEOPATHIC MEDICAL COLLEGE.

New York City.

Organized in 1860. The first class was graduated in 1861. Classes have been graduated each subsequent year.—The faculty embraces nineteen professors, three assistants to professors, three demonstrators and two instructors.

**COURSE OF INSTRUCTION:** One regular course of twenty-two weeks' duration annually. Three years' graded course recommended, but not required. Daily quizzes by the students' society. Clinics at hospitals and dispensaries.—Lectures embrace anatomy, diseases of genito-urinary organs, materia medica, therapeutics, theory and practice of medicine, physical diagnosis, diseases of the heart and lungs, mental and nervous diseases, clinical ophthalmology and otology, gynecology, obstetrics, medical jurisprudence, physiology, chemistry, toxicology, diseases of children, dermatology, general pathology, electro-therapeutics, electro-surgery.

**REQUIREMENTS:** For admission, none.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) three years' study; (4) two full courses of lectures; (5) one course of practical anatomy; (6) satisfactory examination in each department; (7) thesis.

**FEES:** Matriculation, \$5; lectures, \$125; demonstrator, \$10; graduation, \$30.

STUDENTS: Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	152	38	25.0
1878-79	152	40	26.3
1879-80	128	33	25.8
1880-81	165	54	32.7
1881-82	146	36	24.6
1882-83	145	47	32.4

Average percentage of graduates to matriculates during the past six years, *twenty-eight*.

Number of Illinois students attending the last session, 1.

Number of graduates in Illinois, 18.

REMARKS: "The New York Homeopathic Medical College will endorse the diploma of any college *without charge*, provided the applicant appear in person before a committee of the faculty and satisfy it of their qualifications." "Numerous applicants have failed to pass this examination."

#### BELLEVUE HOSPITAL MEDICAL COLLEGE.

New York City.

Organized in 1861. The first class was graduated in 1862. Classes have been graduated each subsequent year.—The faculty embraces ten professors, eight professors of special departments, one adjunct professor, fifteen assistants to chairs, four demonstrators and two prosectors. Five lecturers give instruction during the spring term.

COURSE OF INSTRUCTION: One regular (winter) term of twenty-four weeks' duration and one spring session of twelve weeks' duration; three years' graded course recommended but not required; clinical lectures are given at hospitals and dispensaries; examination quizzes are held by the faculty weekly; these examinations are free and confined to candidates for graduation.—Lectures embrace principles and practice of medicine, clinical medicine, principles and practice of surgery, clinical surgery, operative surgery, obstetrics, diseases of women and children, clinical midwifery, *materia medica*, therapeutics, physiology, pathological anatomy, general, descriptive and surgical anatomy, chemistry, toxicology, nervous diseases, ophthalmology, otology, cutaneous and genito-urinary diseases, hygiene, medical jurisprudence, pathology, diseases of the throat. Private courses on practical subjects are given by the faculty and instructors; average fee \$20.

REQUIREMENTS: For admission, none.—For graduation: (1) twenty-one years of age; (2) proper testimonials of character; (3) three years' study; (4) two full courses of lectures; (5) satisfactory examination in each of the seven departments of instruction, viz: practice of medicine, surgery, obstetrics, *materia medica* and therapeutics, physiology, anatomy and chemistry. The examinations upon practice of medicine and surgery include diseases of the nervous system, pathological anatomy, ophthalmology, and diseases of the skin; (6) one course of practical anatomy. No honorary degrees conferred.

There are three regular examinations for the degree: one at the close of the winter session, one at close of the spring session, and one during the first week in October. The June and October examinations are exclusively for the benefit of those students who have attended the courses of lectures required, the last course being at this college, but whose time of study does not expire until the summer or fall. Graduates of other accredited colleges are examined in all the departments, the same as undergraduates, and must fulfill all the requirements demanded of undergraduates. The faculty will not grant a degree to any graduate of three or more years' standing who does not exhibit to the secretary a certificate of membership in some medical society entitled to representation in the American Medical Association. This rule is invariable.

FEES: Matriculation, \$5; lectures, 2140; demonstrator, \$10; graduation, \$30.

STUDENTS: Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	423	130	30.7
1878-79	450	165	36.6
1879-80	502	142	28.3
1880-81	379	118	31.1
1881-82	480	163	34—
1882-83	467	167	35.7

Average percentage of graduates to matriculates during the past six years, *thirty-two*.

Number of Illinois students attending the last session, 12.

Number of graduates in Illinois, 105.

REMARKS: "The diplomas of this college from 1862 to 1882, inclusive, are in Latin. The diplomas dated in 1883, and thereafter, are in English."

## NEW YORK MEDICAL COLLEGE AND HOSPITAL FOR WOMEN.

New York City.

Organized in 1863. The first class was graduated in 1864. Classes have been graduated each subsequent year. The faculty embraces sixteen professors, three lecturers and one demonstrator.

**COURSE OF INSTRUCTION:** One regular session of twenty-four weeks' duration annually. Three years' graded course recommended, but not required. Quizzes are given by the professors. Actual attendance on lectures is required.—Lectures embrace surgery, principles and practice of medicine, clinical medicine, obstetrics, diseases of women, diseases of children, *materia medica*, anatomy, histology, pathology, physiology, chemistry, ophthalmology, diseases of the throat and chest, hygiene, medical jurisprudence, minor surgery, mental and nervous diseases.

**REQUIREMENTS:** For admission, (a) eighteen years of age; (b) good moral character; (c) examination in the English branches before the faculty.—For graduation, (1) twenty-one years of age; (2) three full years' study; (3) two full courses of lectures; (4) thesis; (5) satisfactory examination.

**FEES:** Matriculation, \$5; lectures, \$60; demonstrator, \$10; graduation, \$10.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	—	27	—
1878-79	—	6	—
1879-80	—	7	—
1880-81	—	5	—
1881-82	—	10	—
1882-83	—	8	—

The number of matriculates for the past six years has averaged between 40 and 50 each year; and the average percentage of graduates to matriculates during the past six years is *twenty-three*.

Number of graduates in Illinois, 2.

## ECLECTIC MEDICAL COLLEGE OF THE CITY OF NEW YORK.

New York City.

Organized in 1865. The first class was graduated in 1866. Classes have been graduated each subsequent year. The faculty embraces nine professors and one lecturer.

**COURSE OF INSTRUCTION:** One course of twenty weeks' duration, annually; clinics at hospitals and dispensary.—Lectures embrace anatomy, descriptive surgery, principles and practice of surgery, theory and practice of medicine, therapeutics, *materia medica*, clinical ophthalmology, obstetrics, chemistry, medical literature, forensic medicine, diseases of children, physiology, pathology, medical jurisprudence, toxicology, diseases of women.

**REQUIREMENTS:** For admission, none.—For graduation, (1) twenty-one years of age; (2) three years' study under the supervision of a reputable physician; (3) two full terms of instruction; (4) a thesis on some medical subject.

**FEES:** Matriculation, \$5; lectures, \$50; demonstrator, \$10; graduation, \$30.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	167	26	24.3
1878-79	138	24	17.4
1879-80	143	32	22.3
1880-81	215	64	29.7
1881-82	146	50	34.2
1882-83	131	37	28.2

Average percentage of graduates to matriculates during the past six years, *twenty-six*.

Number of graduates in Illinois, 3.

**REMARKS:** The whole number of matriculates, since the organization of the school, has been 2016; graduates, 557. Percentage of graduates to matriculates, 29.

## WOMAN'S MEDICAL COLLEGE OF THE NEW YORK INFIRMARY.

New York City.

Organized in 1868. The first class was graduated in 1870. Classes have been graduated each subsequent year.—The faculty embraces eight professors, three clinical professors, three lecturers, two lecturers adjunct, one demonstrator and four instructors.



**COURSE OF INSTRUCTION:** One session of thirty-three weeks' duration, annually. The plan of instruction in this school is arranged to secure a gradation of studies through the three years of the student's course. For this purpose, students must attend three entire sessions. All students will be required to attend a weekly recitation in the studies proper to their year, these recitations forming an essential part of the course. Lectures embrace, first year, principally the elementary branches of anatomy, physiology, materia medica, chemistry, and practical work in the anatomical rooms and chemical laboratory; second year, continue these branches, and hygiene, medicine, surgery, obstetrics, therapeutics, histology, gynecology, diseases of children, ophthalmology, otology, dermatology, nervous diseases; third year, instructions in the latter departments will be continued, and the students will engage in practical medical work under the direction of their teachers, and be required to furnish clinical reports of cases so attended.

**REQUIREMENTS:** For admission, students entering the graded college course, unless they bring a diploma from some recognized literary school, will be required to pass a preliminary examination in the following branches: 1. Orthography, English composition and penmanship, by means of a page written at the time and place of examination. 2. Definitions and synonyms as found in "The Scholar's Companion." 3. Latin, through declensions and conjugations. 4. Arithmetic in denominate numbers, fractions, proportion, percentage and the roots. 5. Algebra, Davies' Elementary, through simple equations. 6. Geometry, Davies' Legendre, first and second books. 7. Botany, physics and chemistry, as found in "Science Primers," edited by Profs. Huxley, Roscoe and Balfour Stewart. For graduation, (1) twenty-one years of age; (2) good moral character; (3) have a good general education; (4) three years in the study of medicine, during which (5) they must have attended three winter sessions of lectures, and (6) received clinical instruction according to the course laid down by this school; (7) a thesis on some medical subject; (8) satisfactory examinations before the faculty and the board of examiners will also be required. A course of lectures in any recognized school will be accepted as one of the terms required, but the last course before graduation must have been attended at this college. The faculty also reserve the right to refuse examination to a student on the ground of what they deem to be moral or mental unfitness for the profession. An annual course of lectures in any accredited school will be received as equivalent to a course of lectures in this school, but a certificate of reading under a preceptor will not be received as equivalent to a course of lectures.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	—	7	—
1878-79	—	10	—
1879-80	—	11	—
1880-81	60	8	13.3
1881-82	49	10	20.4
1882-83	40	5	12.5

Average percentage of graduates to matriculates, 1880-82 inclusive, *fifteen*.

Number of graduates in Illinois, 2.

**REMARKS:** "The faculty reserve the right to refuse examination for graduation to a student on the ground of what they deem to be moral or mental unfitness for the profession."

Candidates for graduation are examined by a board of seven examiners not otherwise connected with the college.

#### NEW YORK FREE MEDICAL COLLEGE FOR WOMEN.

New York City.

Organized in 1871. Extinct. Number of graduates in Illinois, 4.

#### COLLEGE OF MEDICINE OF SYRACUSE UNIVERSITY.

Syracuse, N. Y. (Pop. 51 792.)

Organized in 1872 as the College of Physicians and Surgeons of Syracuse University. In 1875 it assumed its present title. The Geneva Medical College, organized in 1836, was merged into this institution. The first class was graduated in 1873. Classes have been graduated each subsequent year.—The faculty embraces eleven professors, three lecturers, and three instructors.

**COURSE OF INSTRUCTION:** One regular course of thirty-two weeks' duration annually. Attendance at college for three years' graded course recommended, but not absolutely required, as students can graduate on two years' course under certain conditions. (See requirements for admission.) Students are divided into three classes, according to their proficiency and time of study. Studies—First year: Anatomy, physiology, chemistry, microscopy, histology and botany, practical chemistry and histology throughout the year. Second year: Anatomy, physiology, chemistry, materia medica, practice, surgery, pathology and clinics, hygiene, otology, short course of medical chemistry. Third year: Therapeutics, practice, surgery, obstetrics, diseases of children, pathology, gynecology, forensic medicine and ophthalmology, with clinics and dental surgery.



**REQUIREMENTS:** For admission, evidence of possessing a fair preliminary education or examination in the branches of a common English education. Students who have already pursued the study of medicine to some extent, may be examined and promoted to such advanced standing as their acquirements entitle them to. Candidates for the second year will come prepared for the examination in anatomy on the bones and muscles, and on the shoulder, elbow, two radio-ulnar, wrist, hip, knee and ankle articulations; on nutrition in physiology; on the inorganic part of Attilied's chemistry; on the optical principles of the microscope; on part I of Harris and Power's Manual for the Physiological Laboratory; and on the principles of botany.—For graduation: (1) twenty-one years of age; (2) good character; (3) three years' study, the last of which, at least, must have been spent in this school; (4) satisfactory examinations.

**FEES:** Matriculation, \$5; lectures, \$100; chemical laboratory, \$10; graduation, \$25.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percentage.
1878-79	40	5	12.5
1879-80	51	6	11.7
1880-81	60	20	33.3
1881-82	45	11	24.4
1882-83	44	12	27.2

Average percentage of graduates to matriculates during the past five years, *twenty-one*.

Number of graduates in Illinois, 7.

**REMARKS:** "Besides the faculty examinations, candidates for the degree are examined orally by the censors appointed by the State, district and county medical societies."

#### THE REGENTS OF THE UNIVERSITY OF NEW YORK STATE.

Office at Albany, N. Y.

Law conferring the power of granting diplomas, passed in 1872, from which the following is taken:

The regents of the University shall not grant a diploma conferring the degree of Doctor of Medicine upon any one who has not, for at least three years after the age of sixteen, pursued the study of medical science with some physician or surgeon duly authorized to practice, and also attended two complete courses of all the lectures delivered to an incorporated medical college. The regents of the University in the State of New York are authorized to appoint one or more boards of examiners in medicine, which shall consist of not less than seven regularly licensed physicians and surgeons in the State. This board shall examine all candidates, referred to them by the chancellor, in anatomy, physiology, materia medica, pathology, histology, clinical medicine, chemistry, surgery, midwifery, and therapeutics.

All persons who are over twenty-one years of age, of good moral character, and can produce to the chancellor satisfactory proof that they have competent knowledge of all the branches of learning taught in the common schools of the State, and of the Latin language, and have diligently studied medicine for not less than three years, can apply to the chancellor for an examination by a board of examiners. The fee for an examination shall be \$25. The regents shall grant, to any candidate who has been recommended by five members of the board of examiners, a diploma conferring the degree of Doctor of Medicine from the University of New York. Ten dollars must be paid for this diploma.

#### UNITED STATES MEDICAL COLLEGE—(Eclectic).

New York City.

See List of Institutions not recognized by the ILLINOIS STATE BOARD OF HEALTH.

Organized in 1878, in a manner which has since been declared illegal by the State Supreme Court. "The trustees of the college have taken all necessary steps to secure a new charter from the regents of the State University." The first class was graduated in 1879. Classes have been graduated each subsequent year.—The faculty embraces twelve professors, one adjunct professor, one demonstrator and two prosectors.

**COURSE OF INSTRUCTION:** Three years' graded course recommended, but not required. The method of instruction adopted in this college consists of lectures, clinical instruction, experiments in the laboratory, personal teaching, interrogations and recitations.—Lectures embrace anatomy, physiology, chemistry, materia medica, toxicology, therapeutics, psychological science, homeopathic materia medica, principles and practice of medicine, obstetrics, diseases of women and children, surgery, magnetic and electro-therapeutics, medical jurisprudence.

**REQUIREMENTS:** For admission, none.—For graduation: "This college will be governed by the laws of the State. Any person of good moral character, who has attained the age of twenty-one years, received a good English education, pursued the study of medicine and sciences connected therewith for at least three years after the age of sixteen years, and received instruction from some physician and surgeon fully qualified to practice his profession, until he is qualified to enter a medical college, and also after that age

attended two complete courses of lectures delivered in an incorporated medical college, and sustained a satisfactory and honorable examination in every department, is legally entitled to receive the degree of doctor of medicine. He must also present a thesis."

FEES: Matriculation, \$5; lectures, \$75; demonstrator, \$10; graduation, \$30.

STUDENTS: Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1881-82	83	36	43.3
1882-83	51	25	49 +

Average percentage of graduates to matriculates during the past two years, *forty-five*—

REMARKS: Section 1, of article XXI, of the by-laws, provides that the degrees of this college shall be as follows: Doctor of Medicine, Master in Surgery, Accoucheur, Doctor of Pharmacy and Doctor of Anthropology;" and section 2 provides "that these degrees may, each and severally, or collectively, be conferred upon students who have actually and not nominally attended *one* full term or more, as the law prescribes, at the academical sessions of this college, and shall have received the recommendation and approval of the faculty and curators of the same."

Among the graduates of 1883 is one of the trustees, upon whom the degrees, Doctor of Medicine and Doctor of Anthropology, were conferred."

The Dean writes that "the college was organized as a protest against loose practices, and as an advocate of a high standard of medical education in eclectic medicine. I am inclined to think that our greatest fault has been the severity of our examinations for graduation."

Dr. H. G. PIFFARD, states in the New York Medical Journal, April 23, 1883, that "suspicion was first directed towards the legal status of the other eclectic institution, known as the United States Medical College, in consequence of the receipt, by the officers of the New York County Society, of a communication from the Illinois authorities [STATE BOARD OF HEALTH] asking the status of said institution."

#### COLLEGE OF PHYSICIANS AND SURGEONS OF BUFFALO.

Buffalo, N. Y.

See List of Institutions not recognized by the ILLINOIS STATE BOARD OF HEALTH.

Organized in 1879, in a manner which has been decided illegal by the Supreme Court of the State. The first class graduated in 1880. No class was graduated in 1882. A class was prepared for graduation in 1883, but it is probable that no diplomas have been given them.

The following extracts from a circular issued prior to the last session, represents the character of the institution:

"The character of the teachings will, as in the past, be liberal to the fullest extent; Allopathy and Homœopathy being thoroughly taught by an able staff of medical men.

"Liberal medicine is rapidly surpassing the old and 'bigotted' systems, whose graduates should not be considered thoroughly 'competant' to go out into the world to practice the *healing art*; whereas, Liberal Medicine gives them a thorough knowledge of *all* the useful systems, thereby enabling them to more successfully cope with disease and death. We therefore call upon all liberal minded students to carefully consider the advantages to be gained by such a course of lectures."

The following numbers represent the students attending the sessions since its organization—

Session.	Matriculates.	Graduates.	Percent.
1879-80	33	6	18.1
1880-81	65	19	29.2
1882-83	35	15	42.8

Average percentage of graduates to matriculates, *thirty*.

#### BUFFALO COLLEGE OF RATIONAL MEDICINE.

Buffalo, N. Y.

Fraudulent. Extinct.

#### MOHAWK MEDICAL COLLEGE.

Buffalo, N. Y.

Fraudulent. Extinct.

## HAMBURG CANAL COLLEGE.

Buffalo, N. Y.

Fraudulent. Extinct.

## MEDICAL DEPARTMENT OF NIAGARA UNIVERSITY.

Buffalo, N. Y.

Organized in 1883.—The faculty embraces twelve professors and one demonstrator.

**COURSE OF INSTRUCTION:** One regular course of twenty-four weeks' duration annually. The course of study will comprise three full courses of lectures, and a four years' course is recommended.—Lectures embrace: first year, chemistry, anatomy, histology, physiology, materia medica, pharmacy, clinical instruction. Second year, chemistry, anatomy, physiology, pathology, principles and practice of medicine and of surgery, obstetrics, therapeutics, hygiene, clinical instruction. Third year, medicine, surgery, obstetrics, gynecology, diseases of children, diseases of the eye, ear, throat, nervous system and skin, physical diagnosis, therapeutics, hygiene, medical jurisprudence, clinical instruction.

**REQUIREMENTS:** For admission, all (new) students must pass a matriculation examination in such studies as are considered necessary to fit them for the study of medicine, except students who shall produce testamentary evidence of preliminary qualification from a recognized school or college.—For graduation: (1) "completion of the prescribed course of study;" (2) pass the required examinations; (3) twenty-one years of age; (4) good moral character; (5) dissection during two courses; (6) clinical instruction during two courses.

**FEES:** Matriculation, \$5; lectures, \$60; demonstrator, \$5; graduation, \$25.

**NORTH CAROLINA.**

Population, 1,399,750. Number of physicians, 1,360. Number of inhabitants to each physician, 1029.

AN ACT to Incorporate the Medical Society of the State of North Carolina, and for the Establishment of a Medical Board of Examiners.

Be it enacted by the General Assembly of the State of North Carolina, and it is hereby enacted by the authority of the same :

**SECTION 1.** That the association of regularly graduated doctors calling themselves "The State Medical Society," be, and they are hereby declared to be, a body politic and corporate, to be known and distinguished by the name and style of "The Medical Society of the State of North Carolina," and by that name and style shall have perpetual succession, and a common seal; that they, or a majority of them and their successors, shall be able in law to take, demand, receive and possess money, goods and chattels, lands and tenements, and apply the same to the use and for the advancement of the purposes and objects of the said society; that the said medical society, or a majority of them and their successors, shall be able and capable in law of suing and being sued, pleading and being impleaded; that they shall be authorized to make all by-laws, rules and regulations necessary and proper for their own government, and carrying out the purposes contemplated in this act, and for the promotion of medical science and the elevation of the medical profession in this State, not inconsistent with the constitution and laws of North Carolina.

§ 2. That from and after the 15th day of April, 1859, no person shall practice medicine or surgery, or any of the branches thereof, or in any case prescribe for the cure of diseases for fee or reward, unless he or they shall have been first licensed so to do in the manner hereinafter described: *Provided*, that no person who shall practice in violation of this act, shall be deemed guilty of a misdemeanor.

§ 3. That in order to the proper regulation of the practice of medicine and surgery in the State of North Carolina, there shall be established a board of regularly graduated physicians, to be known by the name and title of "The Board of Medical Examiners of the State of North Carolina."

§ 4. That the board of medical examiners of the State of North Carolina shall consist of seven regular graduated physicians.

§ 5. That it shall be the duty of the said board to examine all applicants for license to practice medicine or surgery, or any of the branches thereof, in the State of North Carolina, on the following branches of medical science, viz: anatomy, physiology, surgery, pathology, medical hygiene, chemistry, pharmacy, materia medica, therapeutics and the practice of medicine, and if, on such examination, he or they may be found competent, to grant to such applicant or applicants a license or diploma, authorizing him or them to practice medicine or surgery, or any of the branches thereof, in the State of North Carolina: *Provided*, that five members of the board shall constitute a quorum, and that four of those present shall be agreed as to the qualifications of the applicant.



§ 6. That the said board shall be at liberty to examine for and grant license to practice medicine or surgery, or any of the branches thereof, in this State, to any person so applying, who shall give satisfactory evidence to the board that he is twenty-one years of age and of a good moral character. Such applicants, if found competent, shall have granted to them the license before mentioned, signed by the board of medical examiners, or a majority thereof, and if found incompetent, they shall be rejected.

§ 7. That to prevent delay and inconvenience, two members of the board of medical examiners may grant a temporary license to applicants therefor, and make report thereof to the next regular meeting of the board for confirmation: *Provided*, that such temporary license shall not continue in force longer than the next regular meeting of the board, and that such temporary license shall in no case be granted after the applicant has been refused a license by the board of medical examiners.

§ 8. That it shall be the duty of the medical society of the State of North Carolina to furnish to the General Assembly of the State of North Carolina, by their secretary, a list of members of that society, from which list the General Assembly shall elect seven to constitute the board of medical examiners before mentioned, to continue in office for the term of six years from the date of their election: *Provided*, that whenever any member of this board shall cease to be a member of the medical society of the State of North Carolina, either by resignation or expulsion, his office of medical examiner shall be thereby vacated.

§ 9. That the members of the State medical society shall have power to select the board of medical examiners, except when the legislature choose to exercise this right.

§ 10. That the board of medical examiners shall assemble at the same times and places, when and where the aforesaid medical society assembles, which said society shall assemble at least once in each and every year, at such time and place as the said society, at its next preceding meeting, shall have fixed; and the said board shall remain in session from day to day until all applicants who may present themselves for examination within the first five days after its meeting shall have been examined and disposed of. [This section was adopted, as an amendment to the original act, April, 1871.]

§ 11. That the board of medical examiners shall be, and they are hereby, authorized to elect all such officers, and to frame all such by-laws as may be necessary to carry this law into effect; and in the event of any vacancy by death, resignation or otherwise, of any member of said board, the board, or a quorum thereof, shall be, and they are hereby, empowered to fill all vacancies.

§ 12. That the board of examiners shall keep a regular record of its proceedings, in a book kept for that purpose, which shall always be open for inspection; and shall cause to be entered on a book kept for this purpose the names of each applicant for license, and the name of each applicant licensed to practice medicine and surgery, and the time of granting the same, together with the names of the members of the board present, and shall publish the names of those licensed in two of the newspapers published in the city of Raleigh, within thirty days after the granting of the same.

§ 13. That the said board shall have power to demand of each and every applicant thus licensed the sum of ten dollars, before issuing a license or diploma, and the sum of five dollars for each temporary license, to be paid to the secretary of the board.

§ 14. That the members of the said board shall receive as a compensation for their services four dollars each day during the time of their session and in addition thereto their traveling expenses to and from their places of meeting, by the most direct route from their respective places of residence, to be paid by the secretary of the board out of any moneys in his hands, upon the certificate of the president of the board of medical examiners. [This section was adopted, as an amendment to the original act, April, 1871.]

§ 15. That any person who shall practice medicine or surgery in this State without having first applied for and obtained license from the said board of examiners as provided for by this act, shall not be entitled to sue for or recover before any magistrate or court in this State any medical bill for services rendered in the practice of medicine or surgery, or any of the branches thereof.

§ 16. That the said board shall have the power to rescind any license granted by them, when upon satisfactory proof it shall appear that any physician thus licensed has been guilty of grossly immoral conduct.

§ 17. That the secretary of the board of medical examiners shall give bond, with good security, to the president of the board for the safe keeping and proper payment of all moneys that may come into his hands under provisions of this act.

§ 18. That the provisions of this act shall not apply to any person or persons now engaged in the practice of medicine or surgery in this State, but shall be construed as applying to those only who may hereafter propose to commence the practice of the same in the State of North Carolina.

§ 19. That this act shall be in force on and after the 15th day of April, 1859, and shall be considered a public act.

DR. THOS. F. WOOD, Secretary of the North Carolina State Board of Health, Wilmington, writes: Our board is auxiliary to the State medical society, and so is the State board of examiners, but both boards are independent of each other.

In his presidential address before the State medical society in 1882, Dr. Wood says:

North Carolina was not only among the first to encourage literary effort, etc., but the initiative was taken by her medical society in raising safeguards for the protection of the people from medical impostors. In those early days (1799), when the acquisition of a medical education was very difficult, there was a board of censors whose duty it was to examine candidates for membership. In the board of censors we recognize the germ whose fruit was the State board of medical examiners in 1859.



In this State we have had such a board organized for over twenty years. The law under which the work was done, as defective as it is, has served to elevate the character of the medical profession within our borders more than all other means combined. With commendable loyalty to the profession and to the mandates of the State, physicians have sought the license of the board in increasing greater numbers year by year, until a public opinion in favor of this great work has become wide-spread. A young physician no sooner settles in a community than the people begin to enquire if he has passed the board of medical examiners. The people are the ones interested in the qualities of the new comer, into whose hands it is probable a sick wife or children may fall.

The license of this board is the essential pre-requisite to holding any official medical position in county or State; it is the way by which one attains to membership in this society, and it is the insignia of brotherhood and good standing. It is this acknowledgment of the relation of this board to the honor and dignity of the profession, rather than the trivial penalty connected with the non-compliance of its demands, which brings together such numbers seeking the license. Only one case has come to my knowledge during the past year of the infliction of the penalty.

The task before the board of medical examiners in the last few years, then, has been unusually difficult. In the last four years 142 candidates have been examined, from 23 different schools. Of this number 121 have received the license of the board, and 21 have been rejected.

Doubtless you are interested to know what standard has been demanded in these examinations, and what are the indications of more thorough education among the applicants. It has been the intention of the present board to have an increasingly higher standard yearly, and so commencing with a standard as low as they could conscientiously set, they have demanded such requirements as they believed would be fair in the present demoralized state of medical education. \* \* \*

The law requires that the examiner shall be satisfied with the qualifications of the candidate, both as to his moral character and his medical education, and the standard demanded rests very much with the convictions of the individual examiner as to his duty in the matter. This board has striven, by earnest and concerted action, to make the examinations practical and uniform. Four out of the seven votes must be cast to grant the license (not a very difficult thing), and it is very embarrassing to the board sometimes, when a candidate comes prepared, for instance, on practice of medicine, surgery, physiology, and chemistry and pharmacy, and is ignorant of obstetrics and diseases of women and children, and materia medica and therapeutics. The law could be wisely amended requiring five, or even six, votes out of seven to obtain the license.

It has been very evident to the board that there is no uniform standard maintained in the most of our medical colleges. The maximum and the minimum licentiates are very far apart, the main defect being observed in matters of general education. Upon the whole, the board has not deemed it wise to go too far in advance of the average standard acknowledged by the best medical colleges, and it would have been useless. They have been forced to do an immense amount of drudgery in their examinations, performing their duty with due regard to their obligation to this society, to the State, and to the profession at large.

A résumé of all the remedies for our defective educational system is not needed here. They have been time and again rehearsed by studious men in our profession. Experience as an examiner for several years leads me to the following conclusions:

1st. Medical students are too often admitted to office study without preliminary examination as to their moral, physical and educational fitness.

2d. Physicians having received students into their offices fail to insist on a regular course of study and stated examinations.

3d. There is no discipline and little training, worthy of the name, in most of our medical colleges. There is no standard of examinations.

The experience gained by service for three years on the board of examiners, more than ever convinces me that examinations for the degree of Doctor of Medicine should be done by bodies entirely independent of the college, and this belief is gaining ground over the country.

This is one of the few States in which there is no medical college (for whites.) We are fortunate. It is far wiser to wait until such an institution could be established upon a proper foundation. We can aid the cause of education substantially, by giving our support to colleges which are already showing creditable advance towards a higher standard, rather than by erecting a college without sufficient endowment. No attempt at all should be made until our university is able to employ competent professors at such salaries as would make them independent of the fees of the student.

#### MEDICAL DEPARTMENT OF THE UNIVERSITY OF NORTH CAROLINA.

Chapel Hill, N. C. (Pop., 831.)

Organized in 1796.—This school only gives instruction in medicine, and does not now grant degrees. It granted diplomas in former years.

Number of graduates in Illinois, 1.

## MEDICAL COLLEGE IN ROBESON COUNTY, N. C.

"A college, located in the backwoods of Robeson county, was chartered by the State, in 18... After a career as harmful as it was possible for it to be—sending out yearly numbers of men with diplomas, to prey upon innocent communities on the South Carolina border—it came to an abrupt end, by the death of its only professor."

—Extract from presidential address of Dr. Wood.

## MEDICAL DEPARTMENT OF SHAW UNIVERSITY.

Raleigh, N. C. (Pop., 9265.)

Organized in 1882, for the education of colored students.

COURSE OF INSTRUCTION: One course, of twenty weeks' duration, annually. Three years' graded course recommended, but not required.

REQUIREMENTS: For admission: none. For graduation: two courses of lectures.

FEES: Lectures, \$60.

STUDENTS: Matriculates during the session of 1882-83, 11.

REMARKS: The information given above was obtained from an editorial in the *Medical News* (Phila). The president of the university has been requested to forward information concerning the college, but thus far has not responded.

**OHIO.**

Population, 3 198 062. Number of physicians, 6393. Number of inhabitants to each physician, 502.

EXTRACTS, pertaining to the Practice of Medicine in Ohio, from the Revised Statutes of Ohio, 1880—Chapter XV.

SECTION 4403. No person who has not attended two full courses of instruction of at least twelve weeks each, and graduated at a school of medicine, either in the United States or a foreign country, or who cannot produce a certificate of qualification from a State or county medical society, and is a person of good moral character, shall practice, or attempt to practice, medicine in any of its departments, or prescribe medicine for reward or compensation, for any person within this State, except that when a person has been continuously engaged in the practice of medicine for a period of ten years or more, he shall be considered to have complied with the provisions of this chapter; and when a person has been in continuous practice of medicine for five years or more, he shall be allowed two years in which to comply therewith; and a person violating this section shall not be entitled to any compensation for services rendered.

§ 6396. In counties containing cities of the first class having a population of one hundred and fifty thousand and over, it shall be the duty of physicians and professional midwives to keep a registry of the several births in which they have assisted professionally, which shall contain, as nearly as the same can be ascertained, the time of such birth, sex, color of the child, the names and residence of the parents; and physicians who have attended deceased persons in their last illness, clergymen who have officiated at the funeral, and sextons who have buried deceased persons, shall keep a registry of the name, age and residence of such deceased persons at the time of their death. It shall be the duty of the physicians and professional midwives to report fully the births registered by them, as required by this chapter, to the judge of the probate court of the county every three months, viz: on or before the second Monday of the months of January, April, July and October of each year; in case there is no physician or midwife in attendance at any birth, then the parents shall be required to report to the probate judge within one month; and physicians, clergymen and sextons shall likewise report fully the deaths registered by them, as required by this chapter, to the judge of the probate court of the county, every three months, as above designated; and any person who shall neglect or refuse to comply with or violate the provisions of this chapter, shall forfeit and pay for each offense the sum of ten dollars, to be sued for and recovered in the name of the State of Ohio, and the penalty, when recovered, shall be paid over, one-half to the school fund and one-half to the party making complaint thereof.

§ 6813. Whoever, while in a state of intoxication, prescribes or administers any poison, drug or medicine to another, which endangers the life of such other person, shall be fined not exceeding one hundred dollars, and imprisoned not more than twenty days.

§ 6815. Whoever prescribes any drug or medicine to another, the true nature and composition of which he does not, if inquired of, truly make known, but avows the same a secret medicine or composition, and thereby endangers the life of such other person, shall be fined not exceeding one hundred dollars, and imprisoned not more than twenty days.

§ 6990. Whoever uses upon another an anaesthetic, unless at its administration, and during the whole time the person is wholly or partly under the direct influence of it, there is present a third person competent to be a witness, shall be fined not more than twenty-five nor less than five dollars.

§ 6992. Whoever prescribes, or practices or attempts to practice, medicine in any of its departments, or performs or attempts to perform a surgical operation, without having attended two full courses of instruction, and graduated at a school of medicine, either in this or a foreign country, or who cannot produce a certificate of qualification from a State or county medical society, shall, for the first offense, be fined not more than one hundred dollars nor less than fifty dollars, and for each subsequent offense be imprisoned for the term of thirty days.

#### MEDICAL COLLEGE OF OHIO.

Cincinnati, O. (Pop. 255 139.)

Organized in 1819. The first class was graduated in 1821. Classes have been graduated each subsequent year. In 1858, the Miami Medical College was merged into this institution, and continued in this relation for several years (*vide infra*).—The faculty embraces ten professors, nine assistants to chairs, three lecturers and three demonstrators.

**COURSE OF INSTRUCTION:** A preliminary session of two weeks' duration; a regular session of twenty-two weeks' duration; a spring term of six weeks duration, annually. Clinics at hospital and dispensary.—Lectures embrace ophthalmology, otology, anatomy, clinical surgery, materia medica, therapeutics, clinical medicine, theory and practice of medicine, principles and practice of surgery, obstetrics, diseases of children, gynecology, physiology, medical chemistry, clinical laryngology, pathology, dermatology.

**REQUIREMENTS:** For admission, none.—For graduation: (1) twenty-one years of age; (2) three years' study; (3) two full courses of lectures; (4) satisfactory examination on the seven branches of medicine; (5) good moral character; (6) evidence of having dissected "twice;" (7) evidence of having attended hospital clinics each year of their attendance at the college.

**FEES:** Matriculation, \$5; lectures, \$75; demonstrator, \$5; clinical laboratory (optional), \$5; hospital, \$5; graduation, \$30.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	304	102	33.5
1879-80	326	103	31.6
1881-82	341	104	30.5
1882-83	302	102	33.7

Average percentages of graduates to matriculates for the four years for which data have been obtained, *thirty-two*.

Number of Illinois students attending the last regular session, 15.

Number of graduates in Illinois, 184.

#### WORTHINGTON MEDICAL COLLEGE—*Medical Department of Ohio University.*

Worthington, O.

Organized in 1832. Removed to Cincinnati in 1843. Classes were graduated in 1834, 1835, 1836, 1837 and 1838. In 1845 the name was changed, and it became the Eclectic Medical Institute. (*Vide infra*.)

Number of graduates in Illinois, 1.

#### MEDICAL DEPARTMENT OF THE WILLOUGHBY UNIVERSITY.

Willoughby, Lake County, O.

Organized in 1835. Extinct. No other information has been received.

Number of graduates in Illinois, 1.

#### PHYSIO-MEDICAL COLLEGE (*Cincinnati Literary and Scientific Institute*).

Cincinnati, O.

Organized 1836.—Graduated classes until 1880, when its founder and sole possessor was removed by death.

Number of graduates in Illinois, 8.

#### AMERICAN MEDICAL COLLEGE.

Cincinnati, O.

Organized in 1839. Merged into the Eclectic Medical Institute in 1857.

Number of graduates in Illinois, 14.



## THE CINCINNATI MEDICAL COLLEGE.

Cincinnati, O.

Organized in 1834. Merged into the Ohio Medical College in 1846.

MEDICAL DEPARTMENT OF THE WESTERN RESERVE UNIVERSITY (*Cleveland Medical College.*)

Cleveland, O. (Pop. 160 146.)

Organized in 1843. The first class was graduated in 1844. Classes were graduated each subsequent year until 1876. The college was reorganized in 1861.—The faculty embraces fifteen professors and one demonstrator.

**COURSE OF INSTRUCTION:** One regular term of twenty-four weeks' duration, one reading term of twelve weeks' duration, and a practitioner's course of four weeks' duration, annually. Graded course recommended, but not required. The plan of instruction includes lectures, clinics, recitations, quizzes, and practical demonstrations.—Lectures embrace chemistry, toxicology, anatomy, physiology, histology, materia medica and therapeutics, obstetrics, diseases of children, theory and practice of medicine, principles of surgery, clinical surgery, clinical medicine, pathology, diseases of the eye and ear, physical diagnosis, diseases of women, medical jurisprudence, State medicine, orthopedic surgery.

**REQUIREMENTS:** For admission, students will be required to give satisfactory evidence to the registrar of a good ordinary English education.—For graduation, (1) good English education; (2) twenty-one years of age; (3) three years' study; (4) two full courses of lectures; (5) thesis.

**FEES:** Matriculation, \$5; lectures (including hospital), \$50; graduating, \$30.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1879-80	86	27	31.4
1881-82	188	83	44.1
1882-83	161	50	31.0

Average percentage of graduates to matriculates during the past three years, *thirty-six*.

Number of graduates in Illinois, 44.

**REMARKS:** It has been found impossible to obtain definite information concerning this college and its classes during the years 1877 to 1879, inclusive.

## ECLECTIC MEDICAL INSTITUTE.

Cincinnati, O.

Organized in 1845, as the successor of the Worthington Medical College (organized in 1832, *vide supra*). The first class was graduated in 1845, and two or more classes have been graduated each subsequent year. The American Medical College was merged into this school in 1857, and the Eclectic College of Medicine and Surgery was merged into it in 1859.—The faculty embraces eight professors and one demonstrator.

**COURSE OF INSTRUCTION:** Two courses, one of nineteen weeks', the other of twenty weeks' duration, annually. Three years' graded course recommended, but not required.—Lectures embrace obstetrics, diseases of women, materia medica, therapeutics, pathology, practice of medicine, surgery, anatomy, clinical medicine, clinical surgery, physiology, chemistry, hygiene, forensic medicine.

**REQUIREMENTS:** For admission, none.—For graduation: "Students applying for graduation must have read medicine for three years and attended two full courses of lectures in different years, the last of which has been in this institution; or have read two years and attended three courses of lectures; or have attended four courses of lectures without previous reading. Examinations for the degree of Doctor of Medicine will be held at the close of both winter and spring sessions, but there will be but one public commencement yearly—at the close of the spring session, and all diplomas will bear date of the first Tuesday in June. No diplomas will be issued except on actual attendance and examination. The corporation grants no degrees in *honorary* or *ad eundem*."

**FEES:** Lectures, including matriculation and demonstrator's fee, \$75; graduation, \$25.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	267	121	45.3
1878-79	209	74	35.4
1879-80	243	50	20.5
1880-81	316	114	36+
1881-82	272	100	36.7
1882-83	225	64	28.4

Average percentage of graduates to matriculates during the past six years, *thirty-seven*.



Number of Illinois students attending the last session, 7.

Number of graduates in Illinois, 280.

REMARKS: Women will be admitted to the future sessions. Dr. Jno. M. SCUDDER, Dean, writes that "The Eclectic Medical Institute does not propose to fall behind other colleges of the country in the requirements for admission, in the thoroughness of teaching, and in the medical scholarship necessary for graduation."

#### STARLING MEDICAL COLLEGE.

Columbus, O. (Pop. 51 647.)

Organized in 1847. The first class was graduated in 1848, and classes have been graduated each subsequent year.—The faculty embraces fourteen professors and one demonstrator.

COURSE OF INSTRUCTION: One annual session of twenty-three weeks' duration. Prompt attendance on the beginning of the session will be required. Graded course of three years recommended, but not required.—Lectures embrace anatomy, physiology, surgery, surgical anatomy, operative surgery, theory and practice of medicine, obstetrics, diseases of women, surgical diseases of women, insanity, diseases of children, materia medica, therapeutics, ophthalmology, otology, histology, pathology, toxicology, chemistry, medical jurisprudence.

REQUIREMENTS: For admission, none.—For graduation, (1) twenty-one years of age; (2) three years' study; (3) two full courses; (4) successful examination; (5) thesis.

FEES: Matriculation, \$5; demonstrator, \$5; lectures, \$40; laboratory, \$5; graduation, \$25.

STUDENTS: Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	65	26	40
1878-79	48	20	41.8
1879-80	71	26	36.6
1880-81	99	35	35.3
1881-82	116	55	45.7
1882-83	59	25	40.7

Average percentage of graduates to matriculates during the past six years, *forty*.

Number of graduates in Illinois, 34.

#### HOMEOPATHIC HOSPITAL COLLEGE.

Cleveland, O.

Organized in 1849, as the Western College of Homeopathic Medicine. In 1857 the name was changed to the Western Homeopathic College, and in 1870 the corporation assumed its present title. In 1870 the Homeopathic College for Women was merged into this institution. The first class graduated in 1850. Classes have graduated each subsequent year. The faculty embraces ten professors, two adjunct professors, and one lecturer.

COURSE OF INSTRUCTION: One annual session of twenty-four weeks' duration. Three years' graded course recommended, but not required. Frequent examinations are held by the professors. Clinics at hospital and dispensaries.—Lectures embrace obstetrics, surgery, theory and practice of medicine, ophthalmology, otology, surgical and medical diseases of women, anatomy, materia medica, physiology, medical jurisprudence, microscopy. Special courses in physical diagnosis, obstetrics, minor surgery, chemistry, and microscopy.

REQUIREMENTS: For admission: A satisfactory examination in English scholarship, including orthography, English grammar, penmanship, arithmetic, and United States history, and furnish the examining committee acceptable testimonials as to character. It is not intended to make this a critical examination; but what is required and insisted upon is, that every student shall possess a fair English education. Graduates from literary, scientific and high schools will be exempt from this examination by presenting their diplomas or certificates attesting graduation. For graduation: (1) twenty-one years of age; (2) two full courses of lectures; (3) three years' study; (4) good English scholarship; (5) well-sustained written examinations.

FEES: Matriculation (paid at once), \$5; lectures, \$40; demonstrator, \$5; graduation, \$30.

STUDENTS: Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	106	34	32
1878-79	108	25	23 +
1879-80	130	25	19.2
1880-81	131	26	19.8
1881-82	129	26	20 +
1882-83	131	55	50.9

Average percent. of graduates to matriculates during the past six years, *twenty-seven*.

Number of Illinois students attending the last session, 3.

Number of graduates in Illinois, 11.

REMARKS: The duration of the lecture course has been increased from twenty-two to twenty-four weeks since the last session.

#### CINCINNATI COLLEGE OF MEDICINE AND SURGERY.

Cincinnati, O.

Organized in 1879. The first class was graduated in 1852, and one or more classes have been graduated each subsequent year.—The faculty embraces eleven professors and one demonstrator.

COURSE OF INSTRUCTION: One regular session, of twenty-three weeks' duration. Students may have, if they desire, their course of instruction graded.—Lectures embrace therapeutics, materia medica, principles and practice of medicine, clinical medicine, principles and practice of surgery, surgery, obstetrics, gynecology, physiology, genito-urinary and venereal diseases, chemistry, anatomy, ophthalmology, otology, laryngology, diseases of children, state medicine.

REQUIREMENTS: For admission, none.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) two full courses of lectures; (4) three years' study; (5) satisfactory examination; (6) practical anatomy for one session; (7) hospital clinics for one session.

FEES: Matriculation, \$5; demonstrator (including material), \$10; hospital, \$5; lectures, \$35; graduation, \$25.

STUDENTS: Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percentage.
1876-77	137	68	50—
1877-78	80	32	40
1878-79	—	26	—
1879-80	66	27	40.9
1880-81	93	30	32.2
1881-82	—	34	—
1882-83	—	31	—

Average percent. of graduates to matriculates during the four years given, *forty-one*.

Number of graduates in Illinois, 66.

#### MIAMI MEDICAL COLLEGE.

Cincinnati, O.

Organized in 1852. Classes were graduated in 1853, '54, '55, '56 and '57. In 1858 this college was merged into the Ohio Medical College. In 1865 the Miami Medical College was re-established and a class was graduated in 1866, since which time classes have been graduated annually.—The faculty embraces eleven professors, three lecturers and five demonstrators.

COURSE OF INSTRUCTION: A preliminary term of two weeks' duration, a regular term of twenty-two weeks' duration, and a spring session of six weeks' duration, annually. The curriculum has been so arranged as to embrace a thorough course of didactic lectures with systematic clinical instruction and practical work in the dissecting rooms and laboratories.—Lectures embrace ophthalmology, otology, principles of surgery, gynecology, anatomy, physiology, histology, pathology, laryngology, chemistry, toxicology, genito-urinary and venereal diseases, institutes of medicine, practice of medicine, clinical medicine, obstetrics, therapeutics, materia medica, diseases of women, diseases of children, pharmacy.

REQUIREMENTS: For admission, none.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) three years' study; (4) two full courses of lectures; one course of (5) practical anatomy, (6) of practical chemistry, and (7) of clinics at the hospital; (8) full and satisfactory examination on each branch taught in the college.

FEES: Matriculation, \$5; demonstrator, \$5; practical chemistry, \$7; practical physiology and histology, \$7; lectures, \$75; graduation, \$25; hospital, \$5.

STUDENTS: Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	129	50	38.7
1878-79	120	33	27.5
1879-80	147	48	32.7
1880-81	126	34	27—
1881-82	124	41	33+
1882-83	114	41	36—

Average percentage of graduates to matriculates during the past six years, *thirty-two*.

Number of Illinois students during the last session, 7.

Number of graduates in Illinois, 33.

REMARKS: The course has been lengthened two weeks.

#### PHYSIO-MEDICAL INSTITUTE.

Cincinnati, O.

Organized in 1859. The first class was graduated after ten weeks' instruction in 1860. One or more classes have graduated each subsequent year.—The faculty embraces twelve professors and two demonstrators.

**COURSE OF INSTRUCTION:** One course of lectures of twenty weeks' duration annually. "The course includes didactic and clinical instruction, practical dissections and laboratory work." Examinations of the class are made each day and graduate's reviews are held two or more times each week during fourteen weeks of the session. Three years' graded course recommended, but not required. Lectures embrace science and practice of medicine, clinical medicine, "medical and operative surgery," medical and surgical gynecology, obstetrics, clinical midwifery, chemistry, toxicology, analysis, anatomy, physiology, insanity, mental diseases, therapeutics, materia medica, diseases of children, hygiene, sanitary science, microscopy, histology, pharmacy, (medical jurisprudence taught by the several chairs.)

**REQUIREMENTS:** For admission, "Students must, either by high school certificate or suitable examination, give evidence of having a good English education; furnish satisfactory evidence of proper preparation and of good moral character." The faculty observe the right to exclude a student at any time, for inebriety, improper deportment, or any cause to them sufficient. Attendance must begin with the opening of the lecture term and be punctual throughout.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) three full years' study; (4) two full courses of lectures, and (5) hospital attendance; (6) two courses of dissections; (7) punctual attendance on all the college lectures, graduates' reviews and the two terms of hospital clinics; (8) "written examination in all the departments of instruction." "The standing of the student in the written exercises in practice and the graduates' reviews must also be satisfactory."

**FEES:** Matriculation, \$5; demonstrator, \$5; hospital, \$5; lectures, \$50; graduation, \$25.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	37	14	38—
1878-79	33	7	21+
1879-80	35	12	34.2
1880-81	31	11	32.3
1881-82	36	12	33.3
1882-83	36	12	33

Average percent. of graduates to matriculates during the past six years, *thirty-two (?)*

Number of Illinois students attending the last session, 4.

Number of graduates in Illinois, 25.

#### MEDICAL DEPARTMENT OF THE UNIVERSITY OF WOOSTER.

Cleveland, O.

Organized in 1864, as the Charity Hospital Medical College. It was transferred to its present connection in 1870. The first class was graduated in 1865. One or more classes have been graduated each subsequent year, excepting 1881.—The faculty embraces thirteen professors, one adjunct professor, two lecturers and two demonstrators.

**COURSE OF INSTRUCTION:** "A careful study of the problems of medical education and an intelligent review of the intricate questions connected with the demand for professional services in this country constrain the trustees and faculty to believe that they will best subserve the interests of those who look to them for professional instruction, and at the same time aid in elevating the standard of medical education, by making the following changes: Instead of one session a year, there hereafter will be two sessions per annum—one, to be known as the winter session, commencing the first Wednesday in September, and continuing five months; the other, called the summer session, beginning the first Wednesday in March, and lasting five months. Students who have complied with the legal requirements can graduate at the end of either session. No thesis will be required of candidates for graduation. Examinations will be written." Clinics in hospital and dispensary. Graded course, covering four sessions in two years, recommended but not required.—Lectures embrace obstetrics, medical and surgical diseases of women, clinical gynecology, principles and practice of surgery, clinical surgery, operative surgery, ophthalmology, otology, diseases of children, principles and practice of medicine, diseases of the chest, physical diagnosis, mental and nervous diseases, materia medica, therapeutics, anatomy, chemistry, toxicology, physiology, dermatology.

**REQUIREMENTS:** For admission, (a) good English education; (b) good moral character.—“An examination committee has been appointed in order to comply with the requirements of the laws of the various States, demanding preliminary examinations before admission to medical lectures. Students possessing academical or collegiate degrees, or who have graduated at high schools, etc., would do well to bring evidence of the same with them.”—For graduation: (1) twenty-one years of age; (2) three years' study; (3) at least two “dissections” in practical anatomy; (4) two full courses of lectures; (5) satisfactory examination on seven chairs; (6) certificate of character.

Extract from a letter written by the vice Dean: “While stating, in our announcement, that we graduate at the end of either session, it is not made as clear as it should be that we have not, and never will, graduate a student upon two successive sessions in the same twelve months, unless he has already attended one full course in some other recognized school.”

**FEES:** Matriculation (good for both courses), \$5; hospital, \$5; demonstrator, \$5; lectures, \$40; graduation, \$30.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1878	83	24	29 —
1879	89	37	41.5
1880	88	38	43 +
1881	106	37	35 —
1882	33	14	42.4
1883	57	17	21 +

Average percent. of graduates to matriculates during the past six years, *thirty-six*.

Graduates in Illinois (including Charity Hospital College graduates), 2.

#### PULTE MEDICAL COLLEGE (*Homeopathic*).

Cincinnati, O.

Organized in 1872. The first class was graduated in 1873. Classes have been graduated each subsequent year.—The faculty embraces ten professors, two lecturers and one demonstrator.

**COURSE OF INSTRUCTION:** One annual course of lectures of twenty-one weeks' duration; three years' graded course recommended but not required; clinics at hospital and dispensary; quizzes by students' societies.—Lectures embrace anatomy, physiology, histology, microscopy, pathology, physical diagnosis, medical jurisprudence, chemistry, pharmacology, toxicology, diseases of women, diseases of the eye and ear, obstetrics, surgery, materia medica, theory and practice of medicine, dermatology, diseases of infants and children, and therapeutics.

**REQUIREMENTS:** For admission, none.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) two full courses of lectures; (4) three years' study; (5) thorough examination on all subjects taught in the school; (6) dissection of two “parts.”

**FEES:** Matriculation, (paid but once) \$5; lectures, \$50; hospital, \$5; demonstrator, \$10; graduation, \$30.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	—	44	—
1878-79	—	29	—
1879-80	—	22	—
1880-81	88	41	46.6
1881-82	79	34	43 +
1882-83	66	31	47

• Average percent. of graduates to matriculates during the past three years, *forty-five*.

• Number of Illinois students attending the last session, 1.

Number of graduates in Illinois, 12.

**REMARKS:** J. D. BUCK, M. D., Dean, writes: “Whatever we do, we intend to do squarely, and not as a sham to meet the requirements of your BOARD, although we agree to everything urged in favor of higher education, preliminary to the study of medicine.”

#### AMERICAN HEALTH COLLEGE

Cincinnati, O.

See List of Institutions not recognized by the ILLINOIS STATE BOARD OF HEALTH.

Organized in 1874-76. The faculty embraces one person, who teaches “the great vitapathic system, which he originated and copyrighted.”



The following is extracted from the author's "little red book":

"The author furnishes books, printed lessons, formulas, receipts, specifics, and special modes of vital treatment for all diseases, with the sure method of diagnosis, and all lessons belonging to the vitapathic system, with diploma and full right to practice, to physicians of all schools and all well qualified persons who can learn the new system at home.

"Males, for \$100. Females, for \$75.

"Male students who need verbal lessons and full college course, with all the above, \$150. Female students (the same), \$100.

"N. B.—Students can get general medical instruction wherever most convenient, but best at our branches in the different cities of the Union, preparatory to applying here for vitapathy and its higher graduation, with the grand diploma of the American Health College, the highest institution in the world.

"Regular courses of vitapathic lectures will commence the first of October.

"College open for instruction and graduation at all times. Terms cash.

"No diploma, or books, or lessons, or rights sold separate. All must go together to complete the system to fully paid-up students. The American Health College is not intended to supersede other medical or health colleges, or other medical instruction, some of which may be good as far as it goes in the right direction, and as such is preparatory to the higher vitapathic instruction. But the American Health College is organized and established to teach physicians, and advanced students of all schools, the higher and better vitapathic system, and to instruct and graduate a higher grade of health doctors, who shall understand the whole physical and spiritual dual man, and understand the full nature of his physical and spiritual diseases, and know how to cure them."

### COLUMBUS MEDICAL COLLEGE.

Columbus, O.

Organized in 1875. The first class was graduated in 1876. Classes have been graduated in each subsequent year.—The faculty embraces twelve professors, one lecturer and two demonstrators.

**COURSE OF INSTRUCTION:** Instruction consists of didactic and clinical lectures, with daily examinations in each department, one regular course of twenty-four weeks' duration, annually.—Lectures embrace surgery, clinical surgery, minor surgery, obstetrics, theory and practice of medicine, clinical medicine, chemistry and materia medica, therapeutics, toxicology, anatomy, gynecology, physiology, diseases of children, physical diagnosis, venereal diseases, medical jurisprudence, ophthalmology, histology, pathology.

The announcement for 1883-84 states that "courses will begin this term upon hygiene and state medicine, in accordance with the expressed desire of many who are interested in "State Medicine."

**REQUIREMENTS:** For admission, holders of degrees in the arts and sciences, those who have successfully made the entrance examination to any college, graduates of high schools and normal schools, and those who hold certificates for one year to teach in the public schools, or their equivalent, will be admitted on these testimonials. All others must exhibit evidences of the possession of a good English education.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) two courses of lectures; (4) three years' study; (5) one course of practical anatomy; (6) thesis; (7) satisfactory examination.

**FEES:** Matriculation, \$5; demonstrator, \$5; lectures, \$30; graduation, \$25.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	118	51	42 +
1878-79	144	50	34.7
1879-80	126	41	32.5
1880-81	142	61	42 +
1881-82	131	59	45 +
1882-83	123	46	37 +

Average percentage of graduates to matriculates during the past six years, *thirty-eight*.

Number of Illinois students attending the last session, 2.

Number of graduates in Illinois, 4.

## TOLEDO MEDICAL COLLEGE.

Toledo, O. (Pop., 50 137.)

Organized in 1883. The first class was graduated in 1883.—The faculty embraces thirteen professors and one demonstrator.

**COURSE OF INSTRUCTION:** One regular course of twenty weeks' duration, commencing in March. Graded course recommended, but not required.—Lectures embrace surgery, clinical surgery, ophthalmology, otology, principles and practice of medicine, clinical medicine, descriptive, surgical and morbid anatomy, obstetrics, gynecology, materia medica, therapeutics, chemistry toxicology, physiology, genito-urinary and venereal diseases, histology, dermatology, physical diagnosis, diseases of the chest, medical jurisprudence.

**REQUIREMENTS:** For admission, "the faculty earnestly desire to encourage a higher grade of literary qualifications in the student of medicine, and unless he can produce a diploma from some college, high school, or certificate of qualification from his preceptor, he will be required to pass such an examination as will give satisfactory evidence that he can enter, profitably, on his professional studies."—For graduation: (1) twenty-one years of age; (2) good moral character; (3) three years' study; (4) two full courses of lectures; must have pursued the study of practical anatomy; (6) satisfactory examination in each of the branches taught in the college.

**FEES:** Matriculation, \$5; demonstrator, \$5; lectures, \$40; graduation, \$25.

**STUDENTS:** Session of 1883, matriculates, 19; graduates, 7.

Percentage of graduates to matriculates, 36.8.

## NORTHWESTERN OHIO MEDICAL COLLEGE.

Toledo, O.

Organized in 1883. This college is an outgrowth of the Toledo School of Medicine, organized in 1878, and holding three sessions.—The faculty embraces thirteen professors and one demonstrator.

**COURSE OF INSTRUCTION:** One regular term of twenty weeks' duration, annually.—Lectures will embrace the principles and practice of surgery, clinical surgery, materia medica, therapeutics, diseases of the nervous system, principles and practice of medicine, obstetrics, gynecology, diseases of children, ophthalmology, otology, diseases of the lungs, throat and nasal cavities, general, descriptive surgical and physiological anatomy, hygiene, state medicine, physiology, medical jurisprudence, chemistry, toxicology, histology, pathology.

**REQUIREMENTS:** For admission, "students desiring to attend the lectures of this college, must furnish (1) satisfactory certificates of a good moral character; (2) diploma of graduation from a literary and scientific college or high school, or in absence of this, (3) must pass a satisfactory examination in the branches necessary to a good English education."—For graduation; (1) good moral character; (2) three years' study; (3) twenty-one years of age; (4) two full courses of dissection; (5) two full courses of lectures; (6) attendance during at least two terms of clinical and hospital instruction; (7) must pass a satisfactory examination on all branches, to be conducted, when practicable, by other competent examiners than the professors in each branch; (8) regular attendance during the entire lecture courses, allowance being made only for absence occasioned by the student's sickness, such absences not to exceed twenty per cent. of the course; (8) attendance upon regular examination or quizzes made by each professor, daily, or at least twice each week; (10) thesis.

**FEES:** Matriculation, \$5; demonstrator, \$5; lectures, \$40; graduation, \$25.

## AMERICAN ECLECTIC MEDICAL COLLEGE.

Cincinnati, O.

See List of Institutions not recognized by the ILLINOIS STATE BOARD OF HEALTH.

Extinct. Fraudulent institution, and had no existence except for the sale of diplomas.

## COLLEGE OF PHYSICIANS AND SURGEONS.

Columbus, O.

No definite information concerning this college has been received.

## ECLECTIC COLLEGE OF MEDICINE AND SURGERY.

Cincinnati, O.

Organized in 1856. Merged into the Eclectic Medical Institute in 1859. Classes were graduated in 1857, 1858 and 1859.

## PHYSIO-ECLECTIC MEDICAL COLLEGE.

Cincinnati, O.

See List of Institutions not recognized by the ILLINOIS STATE BOARD OF HEALTH.  
Organized in 1876. Extinct.

## OREGON.

Population, 174 763. Number of physicians, 495. Number of inhabitants to each physician, 353.

E. P. FRAZER, M.D., permanent secretary of the Oregon State Medical Society, writes concerning the attempts to secure legislation for the regulation of the practice of medicine—

Our bill passed the senate by an almost unanimous vote, but was defeated in the house by a large vote. Two years ago it was the reverse, as it passed the house and was defeated in the senate. We have had a bill of some kind before the legislature at every session for the past ten years, and will continue to do so until we succeed.

## MEDICAL DEPARTMENT OF THE WILLAMETTE UNIVERSITY.

Portland, Or. (Pop. 8293.)

Organized in 1864, and located at Salem.—It was removed to Portland in 1878.—The first class was graduated in 1867. Classes have been graduated each subsequent year.—The faculty embraces eleven professors and two lecturers.

COURSE OF INSTRUCTION: One course of twenty weeks' duration, and a preliminary course of four weeks' duration, annually; daily class examinations by the faculty; three years' graded course recommended but not required.—The instruction consists of didactic lectures with demonstrations, clinical teaching and practical teaching in subjects involving manipulation. Women admitted on the same conditions as men.—Lectures embrace general and descriptive anatomy, physiology, chemistry, materia medica, dissections, medical jurisprudence, hygiene, theory and practice of medicine, practice of surgery, obstetrics, gynecology, therapeutics, diseases of children, genito-urinary diseases, psychological medicine.

REQUIREMENTS: For admission: (a) eighteen years of age; (b) good moral character; (c) unless already a matriculate of the university, or a graduate of some respectable college, academy, or high school, every candidate shall be examined as to his previous education and his fitness for entering upon and appreciating the technical study of medicine.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) two full courses of lectures; (4) three years' study; (5) one course of practical anatomy; (6) thesis; (7) satisfactory examination as to professional attainments.

FEES: Matriculation, \$5; demonstrator, \$10; lectures, \$120; graduation, \$30.

STUDENTS: Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	25	7	28
1878-79	32	8	25
1879-80	27	6	22 +
1880-81	31	13	42 —
1881-82	29	9	31.3
1882-83	28	10	36 —

Average percentage of graduates to matriculates during the past six years, *thirty*.

Number of graduates in Illinois, 1.

## PENNSYLVANIA.

Population, 4 232 891. Number of physicians, 7042. Number of inhabitants to each physician, 608. Number of physicians registered under the present law, 6992.

DURING the session of 1880-81, an excellent bill was introduced—mainly through the instrumentality of Dr. T. B. REED, of Philadelphia,—into the Pennsylvania Legislature providing for the creation of a State Board of Health, and the regulation of the practice of medicine through such board. Unexpected hostility to the measure was developed, resulting in its defeat, and the following act was subsequently passed:

AN ACT to Provide for the Registration of all Practitioners of Medicine and Surgery.

Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania, in general assembly met.

SECTION 1, etc. That the prothonotary of each county shall purchase a book of suitable size, to be known as the medical register of the county (if such book has not been purchased already), and shall set apart one full page for the registration of each practitioner; and when any practitioner shall depart this life, or remove from the county, he shall make a note of the same at the bottom of the page, and shall perform such other duties as are required by this act.

§ 2. Every person who shall practice medicine or surgery, or any of the branches of medicine or surgery for gain, or shall receive or accept for his or her services as a practitioner of medicine or surgery, any fee or reward, directly or indirectly, shall be a graduate of a legally chartered medical college or university having authority to confer the degree of Doctor of Medicine (except as provided for in section five of this act); and such persons shall present to the prothonotary of the county in which he or she resides or sojourns, his or her medical diploma, as well as a true copy of the same, including any endorsements thereon, and shall make affidavit before him that the diploma and endorsements are genuine; thereupon, the prothonotary shall enter the following in the register, to-wit: the name in full of the practitioner, his or her nativity, his or her place of residence, the name of the college or university that has conferred the degree of Doctor of Medicine, the year when such degree was conferred, and in like manner any other degree or degrees that the practitioner may desire to place on record; to all of which the practitioner shall make affidavit before the prothonotary, and the prothonotary shall place the copy of such diploma, including the endorsements, on file in his office for inspection by the public.

§ 3. Any person whose medical diploma has been destroyed or lost, shall present to the prothonotary of the county in which he or she resides or sojourns a duly certified copy of his or her diploma; but if the same is not obtainable, a statement of this fact, together with the names of the professors whose lectures he or she attended, and the branches of study upon which each professor lectured, to all of which the practitioner shall make affidavit before the prothonotary, after which the practitioner shall be allowed to register in manner and form as indicated in section two of this act, and the prothonotary shall place such certified statement on file in his office for inspection by the public.

§ 4. Any person who may desire to commence the practice of medicine or surgery in this State after the passage of this act, having a medical diploma issued or purporting to have been issued by any college, university, society or association in another State or foreign country, shall lay the same before the faculty of one of the medical colleges or universities of this Commonwealth for inspection; and the faculty, being satisfied as to the qualifications of the applicant and the genuineness of the diploma, shall direct the dean of the faculty to endorse the same, after which such person shall be allowed to register as required by section two of this act.

§ 5. Any person who has been in the continuous practice of medicine or surgery in this Commonwealth since one thousand eight hundred and seventy-one without the degree of Doctor of Medicine, shall be allowed to continue such practice, but such person shall nevertheless appear before the prothonotary of the county in which he or she resides, and shall present to him a written statement of these facts, to which the practitioner shall make affidavit. Thereupon, the prothonotary shall enter the following in the register, to-wit: the name in full of the practitioner, his or her place of nativity, his or her place of residence, the time of continuous practice in this Commonwealth, and the place or places where such practice was pursued, to all of which the practitioner shall likewise make affidavit, and the prothonotary shall place the certified statement on file in his office for inspection by the public.

§ 6. Every practitioner who shall be admitted to registration shall pay to the prothonotary one dollar, which shall be compensation in full for registration, and the prothonotary shall give a receipt for the same.

§ 7. Any practitioner who shall present to the faculty of an institution an endorsement, or to a prothonotary, a diploma which has been obtained fraudulently, or is in whole or in part a forgery, or shall make affidavit to any false statement to be filed or registered, or shall practice medicine or surgery without conforming to the requirements of this act, or shall otherwise violate or neglect to comply with any of the provisions of this act, shall be deemed guilty of a misdemeanor, and on conviction shall be punished for each and every offense by a fine of one hundred dollars, one-half to be paid to the prosecutor, and the other half to be paid to the county, or be imprisoned in the county jail of the proper county, for a term not exceeding one year, or both, or either, at the discretion of the court.

§ 8. Nothing in this act shall be so construed as to prevent any physician or surgeon legally qualified to practice medicine or surgery in the State in which he or she resides, from practicing in this Commonwealth; but any person or persons opening an office, or appointing any place where he or she may meet patients or receive calls, shall be deemed a sojourner, and shall conform to the requirements of this act.



§ 9. This act shall take effect on the first day of June, one thousand eight hundred and eighty-one.

§ 10. That all acts or parts of acts heretofore passed, and inconsistent with this act, be and the same are hereby repealed.

Dr. R. LOWRY SIBBETT, of Carlisle, writes:

As far as I know, the law is respected. Judge Woodward, of Wilkesbarre, has recently said, "that it is in all respects a valid and constitutional statute." The law is weak in the respect that it does not provide for a board of medical examiners, who might also supervise registration. We all agree that a State board of health is a necessity, and that the duties of the former might be discharged by the latter. Efforts have been made to secure the passage of a bill creating a board of health, but these efforts have thus far failed.

—We are not without hope that such an act will be passed at the next meeting of our legislature. It will be necessary, however, to keep the subject before the profession and the people in order to be successful. In a recent report read by myself before our State medical society, it was suggested that four committees be appointed, consisting each of two principals and two alternates, to prepare and read brief papers on the following subjects, viz: Medical Education, Medical Legislation, Public Hygiene, and Rational Medicine—the same to be published in as many daily and weekly newspapers as will publish them. We must instruct the people before our legislators will vote for efficient laws on those subjects.

—The condition of the profession in Pennsylvania, as compared with what it was ten years ago, or even five years ago, is much more promising. There is a disposition on the part of many good men, in independent positions, to work for higher attainments. The subject of preliminary education has been kept before our State society during this time. It has been discussed with a good deal of feeling, and with success, notwithstanding the fact that representative men of our leading medical schools have spoken against the movement.

—Opposition to higher preliminary attainments, coming from those who are professors in our medical colleges, and an unwillingness to require an examination before matriculation, have forced many of the best men in the profession to the conclusion that the degree of Doctor of Medicine can no longer be taken as positive evidence of fitness to practice. A State board of health, with full authority to conduct examinations and to grant permits to practice, has become a necessity in Pennsylvania.

—The tendency on the part of teachers of medical science in our country is to make all the improvements at the end of the line where the most money is. The matriculate's money is exhausted when he obtains his degree, and he must go to practice. To the few who have money left, a post-graduate course is offered, and finally there is a polyclinic course offered. Pennsylvania offers all this to the profession, and nothing more.

At the last (1883) meeting of the Pennsylvania State Medical Society, considerable time was spent in the discussion of State regulation of the practice of medicine, and the failure of societies and present laws to accomplish this object. Dr. E. A. Wood, of Pittsburg, said, "the present registration act is a failure." Dr. FINLEY, of Altoona, said, "ever since the establishment of the American Medical Association and this society in 1848, not a single year had passed without pleas to the medical colleges for assistance in establishing a preliminary examination for students, but without the first step of encouragement thus far."

A scheme for the examination of students about to engage in the practice of medicine was adopted at the last meeting of the society, which, if carried out, is calculated to do much good.

#### DEPARTMENT OF MEDICINE OF THE UNIVERSITY OF PENNSYLVANIA.

Philadelphia, Pa. (Pop. 847 170.)

Organized in 1765. The first medical diploma issued in America was granted to Dr. JOHN ARCHER by this college (then known as the College of Medicine in Philadelphia) in 1768. Classes have been graduated each subsequent year.—The faculty embraces eleven professors, twenty-seven demonstrators and assistant demonstrators, and four lecturers.

**COURSE OF INSTRUCTION:** A preliminary course of three weeks' duration, a regular course of twenty-six weeks' duration, and a spring course of seven weeks' duration, annually. Three post-graduate courses, each of eight weeks' duration, are held during the year.—Course graded, extending over three years. Four years' graded course recommended, but not required. Examinations at the end of each year.—Lectures embrace anatomy, obstetrics, diseases of women and children, theory and practice of medicine, surgery, clinical surgery, clinical gynecology, pathology, materia medica, therapeutics, pharmacy, chemistry, physiology, histology, ophthalmology, otology, dermatology, mental and nervous diseases, laryngology, physical diagnosis, orthopedic surgery, and venereal diseases.

**REQUIREMENTS:** For admission: (a) collegiate degree; (b) certificate of having passed matriculation examination of a recognized college; (c) certificate, covering the required subjects, from a recognized normal or high school of a duly organized county medical society having instituted a preliminary examination; (d) preliminary examination embracing, first, to write a brief essay, not exceeding a page of foolscap, which will serve as a test of his qualifications in orthography and grammar; second, to undergo an examination in the elementary principles of physics, on the subjects considered in Part I of Fownes' *Chemistry*.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) three years' study; (4) three full courses of lectures; (5) pass required examinations; (6) thesis. Students who have attended one course in a regular dental school will

be admitted as students of the second course in the University of Pennsylvania, after having passed a satisfactory examination in general chemistry and materia medica and pharmacy. Students who have attended two courses in a regular medical school will be admitted as students of the third course in this institution, after having satisfactorily passed an examination in general and medical chemistry, materia medica and pharmacy, anatomy and physiology. Graduates of other regular medical schools in good standing will be admitted as students of the third class without examination. Graduates of colleges of pharmacy and dental colleges in good standing are admitted to the second course without an examination.

**FEES:** Matriculation, \$5; graduation, \$50; lectures, including laboratory and dissection, \$150.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	375	127	33.8
1878-79	343	91	26.5
1879-80	377	116	30
1880-81	374	115	30
1881-82	363	122	33.3
1882-83	367	104	28.6

Average percentage of graduates to matriculates during the past six years, *thirty*.

Number of Illinois students attending the last session, 6.

Number of graduates in Illinois, 73.

**REMARKS:** During the first and second years, much of the student's time is occupied with practical work in the various laboratories of chemistry, pharmacy, osteology, histology and pathological histology, and in dissection; but throughout the second and third sessions he is required to attend the general medical and surgical clinics at the University and Philadelphia hospitals, while special clinical facilities are provided for the third year. In this year, each student receives bedside instruction in clinical medicine and surgery, in physical diagnosis, and in gynecology. Opportunities are afforded for the practical study of diseases of the eye, ear, throat and skin, and for acquiring proficiency in the use of the various instruments employed in their treatment. For this purpose the third year class is divided into sections of convenient size, each of which receives direct personal instruction in the various practical subjects above mentioned. No honorary degrees conferred.

#### JEFFERSON MEDICAL COLLEGE.

Philadelphia, Pa.

Organized in 1826 as the Medical Department of Jefferson College at Canonsburg, Pa. The first class was graduated in 1827. Classes have been graduated each subsequent year.—The faculty embraces eight professors, two honorary professors and eight demonstrators.

**COURSE OF INSTRUCTION:** A preliminary course of three weeks' duration, a regular course of twenty-four weeks' duration, and a spring course of eight weeks' duration. Attendance upon the spring course of lectures continues to be large, and the faculty recommend all who have it in their power, to use the facilities thus offered. Daily clinics at hospitals and dispensary.—Lectures embrace obstetrics and diseases of women and children, practice of medicine, clinical medicine, general descriptive and surgical anatomy, medical chemistry, toxicology, materia medica, general therapeutics, institutes of medicine, medical jurisprudence, principles of surgery, clinical surgery, practice of surgery, histology, pathology, pharmacy, ophthalmology, otology, gynecology, laryngology, electro-therapeutics, microscopy, dermatology, genito-urinary diseases, physical diagnosis, practical and laboratory instruction in obstetrics, medicine, chemistry, materia medica and therapeutics, physiology, histology, operative and minor surgery, bandaging, pathological anatomy and anatomy.

**REQUIREMENTS:** For admission, none.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) two full courses of lectures; (4) three years' study; (5) thesis. Students of dental colleges, where a five months' winter session is held, and where full courses are given on anatomy, materia medica, physiology and chemistry, may become candidates, after attendance on two courses at such colleges, and one *full course* at the Jefferson Medical College, with another on surgery, practice of medicine, and obstetrics. Students of colleges of pharmacy, where full courses are given on materia medica and chemistry, may become candidates, after attendance on two courses at such colleges and one *full course* at the Jefferson Medical College, with another on anatomy, surgery, practice of medicine, physiology and obstetrics.

**FEES:** Matriculation, (paid but once) \$5; lectures, \$140; demonstrator, (of anatomy) \$10; all other practical courses free; graduation, \$30.

STUDENTS: Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	598	203	33.9
1878-79	572	196	34.2
1879-80	572	196	34.2
1880-81	609	205	33.6
1881-82	630	247	39.2
1882-83	569	227	39.8

Average percentage of graduates to matriculates for six years, *thirty-five*.

Number of Illinois students attending the last session, 11.

Number of graduates in Illinois, 188.

REMARKS: Post-graduate instruction is given by five courses of seven weeks each.

#### HAINEMANN MEDICAL COLLEGE (*Homeopathic*.)

Philadelphia, Pa.

Organized in 1848.—The first class was graduated in 1849. Classes have been graduated each subsequent year.—The faculty embraces ten professors, three lecturers and five demonstrators.

COURSE OF INSTRUCTION: One regular course of lectures of twenty-one weeks' duration and a spring course annually. Three years' graded course recommended, but not required. Clinics at hospital and dispensary. "Recitations, quizzes, demonstrations, experiments and other practical exercises will be called into requisition as aids in the work of imparting instruction."—Lectures embrace anatomy, physics, chemistry, toxicology, obstetrics, physiology, sanitary science, pathology, practice of medicine, operative surgery, clinical surgery, principles of surgery, clinical medicine, surgical anatomy, physical diagnosis, microscopy, histology, ophthalmology, otology, botany, pharmacy, insanity, medical jurisprudence.

REQUIREMENTS: For admission: certificate signed by preceptor as evidence of qualifications for the study of medicine.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) three years' study; (4) two full courses of lectures; (5) at least one course of practical anatomy and surgery; (6) thesis. A student who has attended one or more courses in a medical college in which homeopathy is not taught, must attend one full session of instruction in this institution, and in addition to the general average required for graduation, he must obtain a two-thirds average in the following departments: Homeopathic institutes and materia medica, practice of medicine and clinical medicine.

FEES: Matriculation, \$5; lectures, \$100; practical surgery, \$10; demonstrator, \$10; practical obstetrics and chemistry (optional), \$10 each; graduation, \$30.

STUDENTS: Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	161	52	32.1
1878-79	162	61	37.6
1879-80	192	75	39
1880-81	208	83	39.9
1881-82	148	57	38.5
1882-83	147	52	35.4

Average percent. of graduates to matriculates during the past six years, *thirty-seven*.

Number of Illinois students attending the last session, 3.

Number of graduates in Illinois, 29.

REMARKS: Sixty percent. of the graduates (session of 1882-83) had pursued the three years' graded course.

#### WOMAN'S MEDICAL COLLEGE OF PENNSYLVANIA.

Philadelphia, Pa.

Organized in 1850.—The first class was graduated in 1851. Classes have been graduated each subsequent year.—The faculty embraces ten professors, five lecturers, three demonstrators, and three instructors.

COURSE OF INSTRUCTION: A regular course of twenty-one weeks' duration, and a spring course of ten weeks' duration, annually. Three and four years' graded course recommended but not required. Weekly examinations given by regularly appointed instructors throughout the winter course.—Lectures embrace chemistry and toxicology, anatomy, clinical anatomy, physiology, hygiene, medical jurisprudence, materia medica and general therapeutics, principles and practice of medicine, principles and practice of surgery, obstetrics, gynecology, diseases of children, laryngology, rhinoscopy, histology, microscopy, pathology, pharmacy, dental physiology and pathology, nervous diseases. Practical work in laboratories noted in the requirements for graduation.

REQUIREMENTS: For admission, none.—For graduation: (1) twenty-one years of age; (2) three years' study; (3) two full courses of lectures; (4) two courses of practical anatomy, having made at least one creditable dissection of each of the usual divisions of the cadaver; (5) one course in the chemical and one in the pharmaceutical laboratory; (6) one course of lectures on pathology, and (7) one on histology, including the practical work of the spring in the use of the microscope; (8) satisfactory evidence of having attended at least two courses of clinical lectures in the department of general medicine, surgery, obstetrics and gynecology; (9) thesis; (10) mental and moral fitness for the profession.

FEEs: Matriculation (paid but once,) \$5; lectures, \$105; demonstrator, \$10; graduation, \$30; clinical laboratory, \$10; pathological laboratory, \$10; pharmaceutical laboratory, \$5; physiological laboratory, \$5.

STUDENTS: Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	130	17	13 +
1878-79	144	20	13.8
1879-80	146	13	8.9
1880-81	170	20	11.7
1881-82	111	19	17 +
1882-83	125	35	28

Average percent. of graduates to matriculates during the past six years, *fifteen*.

Number of Illinois students attending the last session, 2.

Number of graduates in Illinois, 12.

#### PENNSYLVANIA MEDICAL COLLEGE.

Philadelphia, Pa.

Organized in 18—. Extinct.

Number of graduates in Illinois, 12.

#### PHILADELPHIA COLLEGE OF MEDICINE AND SURGERY.

Philadelphia, Pa.

Organized in 1846. Extinct.

Number of graduates in Illinois, 9.

#### FRANKLIN MEDICAL COLLEGE.

Philadelphia, Pa.

Organized in 1847. Existed to 1852. Extinct.

#### MEDICAL DEPARTMENT OF LINCOLN UNIVERSITY.

Oxford, Pa.

Organized in 1870. Extinct.

#### ECLECTIC MEDICAL COLLEGE OF PENNSYLVANIA.

Philadelphia, Pa.

Organized in 18—. Extinct. See List of Institutions not recognized by the ILLINOIS STATE BOARD OF HEALTH.

After being in operation a few years, this institution passed into the hands of Buchanan and his colleagues, and became fraudulent.

Number of graduates in Illinois, 18.

#### PHILADELPHIA UNIVERSITY OF MEDICINE AND SURGERY.

Philadelphia, Pa.

See List of Institutions not recognized by the ILLINOIS STATE BOARD OF HEALTH.

Extinct. Fraudulent institution.



## HOMEOPATHIC MEDICAL COLLEGE.

Philadelphia, Pa.

Organized in 18—, Extinct.

Number of graduates in Illinois, 26.

## PENN UNIVERSITY.

Philadelphia, Pa.

See List of Institutions not recognized by the ILLINOIS STATE BOARD OF HEALTH.

Extinct.

## MEDICO CHIRURGICAL COLLEGE OF PHILADELPHIA.

Philadelphia, Pa.

Organized in 1881. The first class was graduated in 1882.—The faculty embraces seven professors, five clinical professors, four assistant professors, two demonstrators and one instructor.

**COURSE OF INSTRUCTION:** A preliminary term of four weeks' duration, and a regular term of twenty-four weeks' duration, annually. Daily quizzes by the professors. Three years' graded course required.—Lectures embrace—Freshman year, pharmacy, dentistry, minor surgery including bandaging, histology, elementary anatomy, physiology, materia medica, botany, elementary chemistry, with laboratory instruction in practical pharmacy, chemical manipulation, practical histology, and also dissections.—Junior year, general and visceral anatomy, physiology, general chemistry, therapeutics, practice of medicine, surgery, obstetrics, gynecology, pathology, with laboratory instruction in analytical chemistry and pathological histology, also dissections, and the several clinics of the college.—Senior year, regional anatomy, pathology, physiological chemistry, sanitary science, therapeutics, practice of medicine, surgery, obstetrics, gynecology, diseases of the throat and upper air passages, diseases of the eye and ear, mental diseases, insanity, physical diagnosis, diseases of the skin, diseases of children, operative surgery, together with laboratory instruction in medical chemistry and pathological histology, surgical operations upon the cadaver, and the regular clinics of the college. During the spring or auxiliary literary term, instruction will be given in natural philosophy, botany, physical geography, mental philosophy, principles of English composition, elements of the Greek and Latin languages, hygiene, comparative anatomy and zoology, medical jurisprudence, toxicology, mineralogy and geology. Practical instruction in pathological histology, physical diagnosis, surgery, obstetrics and gynecology, pharmacy, chemistry, and electro-therapeutics.

**REQUIREMENTS:** For admission, (a) certificate of having graduated at a high school, or of having attended a classical seminary or college for one year, or of having passed a preliminary examination of a duly organized county medical society; or (b) attendance on the auxiliary literary term, the studies of which are: elements of English literature, of Latin, of Greek, and natural science.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) three years' study; (4) three regular winter sessions; (5) one full term of physical and practical instruction in subjects in which instruction is given (mentioned above); (6) "passage of the different examinations."

**FEES:** Matriculation, \$5; lectures, \$140; demonstrator, \$10; graduation, \$30.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1881-82	31	3	9.6
1882-83	—	10	—

Requests were made for a statement of the number of matriculates during the session of 1882-83, but no reply was received.

**RHODE ISLAND.**

Population, 276,531. Number of physicians, 396. Number of inhabitants to each physician, 698.

SECTION 12 of chapter 85, Public Statutes of Rhode Island, 1882, having reference to the registration of births, deaths and marriages, provides that every clergyman, physician, coroner, undertaker or clerk of any meeting of the Society of Friends, shall cause his

name and residence to be recorded in the town clerk's office of the town where he resides. By another section of the same chapter, he is required to report, without compensation, all still-births, contagious diseases, and results of vaccination.

The physician is exempt from jury and military duty.

#### MEDICAL DEPARTMENT OF BROWN UNIVERSITY.

Providence, R. I.

Organized in 1811. "Lectures were delivered and classes graduated annually, from 1814 to 1827, inclusive, excepting the years 1820-21, when it is believed that no classes were graduated. The department fell under President Wayland's strict rules of discipline, enforced on the medical professors."—[G. W. PARSONS, M. D., of Providence.

### **SOUTH CAROLINA.**

Population, 995 577. Number of physicians, 919. Number of inhabitants to each physician, 1084.

#### **AN ACT to Regulate the Licensing of Physicians and Surgeons.**

SECTION 1. Be it enacted by the Senate and House of Representatives of the State of South Carolina, now met and sitting in General Assembly, and by the authority of the same: A person shall not practice physic or surgery for compensation within the State unless he is twenty-one years of age, and either has been heretofore authorized so to do, pursuant to the laws in force at the time of his authorization, or is hereafter authorized to do so by subsequent sections of this act.

§ 2. From and after the first day of June, 1882, every person now duly authorized to practice physic and surgery within this State, and every person hereafter duly authorized to practice physic and surgery, shall, before commencing to practice, register in the office of the clerk of the court of the county where he is practicing or intends to commence the practice of physic and surgery, in a book to be kept by said clerk, his name, residence and place of birth, together with his authority for so practicing physic and surgery, as prescribed in this act. The person so registering shall subscribe, and verify by oath or affirmation, before a person duly qualified to administer oaths under the laws of State, an affidavit containing such facts, and whether such authority is by diploma or license, and the date of the same and by whom granted, which, if wilfully false, shall subject the affiant to conviction and punishment for perjury. The said clerk of the court to receive a fee of twenty-five (25) cents for such registration, to be paid by the person so registering: *Provided*, that any registration made in conformity to the provisions of the act herein amended are hereby confirmed and made valid." [This section, an amendment to the original act, was approved July 5, 1882.]

§ 3. A person who violates either of the two preceding sections of this act, or who shall practice physic or surgery under cover of a diploma illegally obtained, is guilty of a misdemeanor, punishable by fine not less than (\$50) fifty dollars nor more than (\$200) two hundred dollars for the first offense, and each subsequent offense by a fine not less than (\$100) one hundred dollars, or by imprisonment for not less than (30) thirty days nor more than (90) ninety days, or both. The fine, when collected, shall be paid, the one-half to the person or corporation making the complaint, the other half into the county treasury.

§ 4. A person coming to the State may be licensed to practice physic or surgery, or either, within the State in the following manner: If he has a diploma conferring upon him the degree of Doctor of Medicine, issued by an incorporated university, medical college or medical school without the State, he shall exhibit the same to the faculty of some incorporated medical college, or the medical board of the State, with satisfactory evidence of his good moral character, and such other evidence, if any, of his qualifications as a physician and surgeon as said medical college or medical board may require. If his diploma and qualifications are approved by them, then they shall endorse said diploma, which shall make it, for the purpose of his license to practice medicine and surgery within this State, the same as if issued by them. The endorsed diploma shall authorize him to practice physic and surgery within the State, upon his complying with the provisions of section two (2) of this act.

§ 5. The medical board referred to in the previous section shall be composed of the physicians and surgeons constituting the local boards of health in various counties of the State—the local board of health for each county having jurisdiction over all matters contrary to this act, occurring within its borders.

§ 6. The degree of Doctor of Medicine lawfully conferred by any medical college or university in this State shall be a license to practice physic and surgery within the State, after the person to whom it is granted shall have complied with section (2) two of this act.

§ 7. Nothing in this act shall apply to commissioned medical officers of the United States army or navy, or the United States marine-hospital service.<sup>1</sup>

§ 8. All acts or parts of acts inconsistent with this act are hereby repealed.

Approved Dec. 17, 1881.

SECTION 920 of the General Statutes provides as follows: In no case wherein the provisions of this chapter shall have been violated, shall any person so violating receive a compensation for services rendered: *Provided*, that nothing herein contained shall in any way be construed to apply to any person practicing dentistry, or to females practicing midwifery.

#### MEDICAL COLLEGE OF THE STATE OF SOUTH CAROLINA.

Charleston, S. C. (Pop., 49,984.)

Organized in 1829. The first class was graduated in 1830. Classes were graduated annually until 1862, when operations were suspended during the war, and until 1872, when they were resumed. Classes have been graduated annually since 1873.—The faculty embraces six professors, two assistant professors, two instructors and two demonstrators.

**COURSE OF INSTRUCTION:** One regular course of eighteen weeks' duration annually clinics at hospital. Graded course recommended, but not required.—Lectures embrace principles and practice of surgery, clinical surgery, pathology, practice of medicine, clinical medicine, physiology, chemistry, anatomy, ophthalmology, otology, obstetrics, gynecology, materia medica, therapeutics, microscopy, pathology, laboratory instruction (compulsory on first-course students).

**REQUIREMENTS:** For admission, none.—For graduation: (1) twenty-one years of age; (2) preliminary education satisfactory to the faculty; (3) three years' study; (4) two full courses of lectures; (5) examination in all the branches. Attendance upon lectures, habits and general character must be satisfactory to the faculty.

**FEES:** Matriculation, \$5; laboratory, \$5; lectures, including demonstrators and one hospital ticket, \$75; graduation, \$30.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	60	17	28.3
1878-79	71	20	28
1879-80	74	23	29.7
1880-81	77	21	27
1881-82	56	19	33.9
1882-83	61	18	29.5

Average percentage of graduates to matriculates during the past six years, *twenty-nine*.

**REMARKS:** Pharmacy students are also included in the number of matriculates here given—thus affecting the proportion of graduates to matriculates.

#### MEDICAL DEPARTMENT OF THE UNIVERSITY OF SOUTH CAROLINA.

Columbia, S. C.

Organized in 1866.—Extinct.

#### CHARLESTON MEDICAL COLLEGE.

Charleston, S. C.

Organized in 18—. Extinct.

### TENNESSEE.

Population, 1,542,359. Number of physicians, 2688. Number of inhabitants to each physician, 574.

C. C. FITE, M. D., Secretary of the Tennessee State Board of Health, writes: We have no laws bearing upon the practice of medicine. In this State the practice of medicine is free to all. Indians, negroes, confidence men and all that ilk ply their "trade" with no restrictions whatever. Any man who claims to be a doctor is one; hence druggists who do not know enough to make a living, turn out as doctors in full practice before you know it. A farmer boy too lazy to plow reads an old work on practice, or "Every Man his own Doctor," invests \$6 in drugs and is a physician, and *being a "regular" we all consult with him*. Our legislators will not touch, and our doctors are too timid to press, the subject; and so we languish in the old paths.

## MEDICAL DEPARTMENT OF THE UNIVERSITY OF NASHVILLE AND VANDERBILT UNIVERSITY.

Nashville, Tenn. (Pop., 43 350.)

Organized in 1850 as the Medical Department of the University of Nashville, and assumed its present relation in 1874. The first class was graduated by the University of Nashville in 1852; and the first diploma was issued by the Vanderbilt University in 1875. Classes have been graduated annually by the respective Universities since these dates.—The faculty embraces ten professors, five lecturers and a demonstrator.

**COURSE OF INSTRUCTION:** A preliminary session of four weeks' duration, and a regular session of twenty weeks' duration are delivered annually. Daily examinations are held by professors. Clinics at hospital.—Lectures embrace anatomy, physiology, surgery, surgical anatomy, microscopy, materia medica, therapeutics, chemistry, obstetrics, theory and practice of medicine, clinical medicine, state medicine, diseases of women, diseases of children, diseases of the ear and eye, histology, pathology, physical diagnosis, medical jurisprudence, hygiene, operative surgery.

**REQUIREMENTS:** For admission, none.—For graduation, (1) twenty-one years of age; (2) good moral character; (3) three years' study; (4) two full courses of lectures; (5) dissection during one session. "The candidate is elected by ballot, and upon receiving three negative votes, will be rejected; but will be entitled to another examination by appearing before a full faculty, after all other applicants have been examined. No premature examination will be granted except by consent of the entire faculty."

**FEES:** Matriculation, \$5; demonstrator, \$10; lectures, \$75; graduation, \$100.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1879-80	311	141	45.3
1881-82	327	191	58
1882-83	246	116	47 +

Average percentage of graduates to matriculates during three years, *fifty*.

Number of Illinois students attending the last session, 1.

Number of graduates in Illinois, 29.

**REMARKS:** The honorary degree was conferred, at the 1883 commencement, on a matriculate of the last session, 1882-83.

## MEMPHIS MEDICAL COLLEGE.

(Medical Department, Cumberland University.)

Memphis, Tenn.

Organized in 1854.—Suspended during the war of the Rebellion. Reorganized in 1872. Courses of lectures were delivered until 187-. Extinct.

Number of graduates in Illinois, 2.

## NASHVILLE MEDICAL COLLEGE.

(Medical Department of the University of Tennessee.)

Nashville, Tenn.

Organized in 1876. Became connected with the University of Tennessee in 1880. The first class was graduated in 1878. Classes have been graduated each subsequent year.—The faculty embraces thirteen professors and one demonstrator.

**COURSE OF INSTRUCTION:** One course of lectures of twenty weeks' duration and a preliminary course of four weeks' duration, annually. Examinations by the faculty daily. Clinics at hospital and dispensary.—Lectures embrace theory and practice of medicine, clinical medicine, chemistry, state or preventive medicine, insanity, hygiene, surgery, clinical surgery, obstetrics, clinical midwifery, medical and surgical diseases of women, diseases of children, general, descriptive and surgical anatomy, materia medica, therapeutics, physiology, medical jurisprudence, medical and surgical diseases of the eye, ear and throat, dental surgery.

**REQUIREMENTS:** For admission, none.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) two full courses of lectures; (4) dissections during attendance in this school; (5) satisfactory examination by the faculty.

**FEES:** Matriculation (paid but once) \$5; demonstrator, \$10; lectures, \$75; graduation, \$10.



STUDENTS: Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	125	—	—
1878-79	132	—	—
1879-80	167	52	31 +
1880-81	134	55	41 +
1881-82	144	69	48 —
1882-83	133	58	43.6

Average percent. of graduates to matriculates during the past four years, *forty*.

Number of Illinois students attending the last session, 6.

Number of graduates in Illinois, 17.

REMARKS: One honorary degree was conferred at the last commencement.

#### MEHARRY MEDICAL DEPARTMENT OF CENTRAL TENNESSEE COLLEGE.

Nashville, Tenn.

Organized in 1876. The first class was graduated in 1877. Devoted to the education of colored students, male and female.—The faculty embraces seven professors, one assistant professor, and one demonstrator.

COURSE OF INSTRUCTION: One annual session of nineteen weeks' duration. Three years' graded course recommended, but not required.—Lectures embrace: "During the first year's attendance, students will be required to recite daily in anatomy, physiology, chemistry and materia medica, have practical work in dissecting, and work two hours per day in the chemical laboratory. They will also receive instructions in elementary botany. At the close of the session, they are required to pass a satisfactory written examination in the above mentioned branches. The studies for the second year consist of surgery, gynecology, obstetrics, surgical anatomy, theory and practice of medicine, histology, microscopy, two hours' work per week in medical chemistry, and daily recitations and attendance on the lectures will be required. Written monthly examinations are required during the whole course." Lectures are also delivered on medical jurisprudence and diseases of women.

REQUIREMENTS: For admission: "Applicants must be at least eighteen years of age, of good moral character, and pass examinations in arithmetic, geography, grammar, reading, writing and spelling. Graduates of other recognized colleges and normal schools will, on presenting their diplomas, be admitted without examination."—For graduation: (1) twenty-one years of age; (2) three years' study; (3) two full courses of lectures; (4) must pass a satisfactory written examination in all of the branches laid down in this course, including the outlines of Bible history and doctrine; (5) present an acceptable original thesis on some medical subject.

FEES: Tuition, \$30; graduation, \$10; materials for practical anatomy and chemistry at cost.

STUDENTS: Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates:

Session.	Matriculates.	Graduates.	Percent.
1877-78	9	3	—
1878-79	8	8	—
1879-80	10	8	—
1880-81	24	3	—
1881-82	29	8	27.6
1882-83	30	5	16.6

Average percentage of graduates to matriculates during the past two years, *twenty-two*. Only the numbers of new matriculates, and not the total numbers attending the sessions of 1877-78, 1878-79, 1879-80 and 1880-81, being furnished, the percentages of graduates to matriculates have not been computed for these years.

REMARKS: Seventy-five percent. is required to pass the examinations. The Dean writes that the requirements for admission and graduation will be raised as soon as circumstances will permit.

#### BOTANIC MEDICAL COLLEGE.

Memphis, Tenn.

Extinct.

## MEMPHIS HOSPITAL MEDICAL COLLEGE.

(Medical Department Southwestern Baptist University.)

(Memphis, Tenn. Pop., 33 592.)

Organized in 1880. The first class was graduated in 1881.—The faculty embraces nine professors.

**COURSE OF INSTRUCTION:** A preliminary course of two weeks' duration, and a regular course of twenty weeks' duration, annually. Daily examinations and quizzes by the professors. Clinics at hospital and dispensary.—Lectures embrace materia medica, therapeutics, surgery, clinical and operative principles and practice of gynecology, anatomy—descriptive and surgical, ophthalmology, practice of medicine, clinical medicine, otology, obstetrics, diseases of the throat, physiology, diseases of the chest, chemistry, toxicology, diseases of the nervous system, diseases of children.

**REQUIREMENTS:** For admission, none.—For graduation: (1) twenty-one years of age; (2) good moral character; (3) two full courses of lectures; (4) dissection during one session; (5) the-is; (6) satisfactory examination in all branches taught. "No examination for graduation will be granted in advance of the time fixed for examining the entire class, without the unanimous consent of the faculty."

**FEES:** Matriculation, \$5; lectures, \$50; demonstrator, \$10; graduation, \$30.

**STUDENTS:** Number of matriculates and of graduates at each session since the organization of the college, and percentage of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1880-81	—	9	—
1881-82	89	30	33.7
1882-83	95	32	33.6

Average percentage of graduates to matriculates during the past two years, *thirty-three*.

**TEXAS.**

Population, 1 592 574. Number of physicians, 3003. Number of inhabitants to each physician, 530.

**AN ACT to Regulate the Practice of Medicine,**

Be it enacted by the Legislature of the State of Texas:

**SECTION 1.** That no person shall be permitted to practice medicine, in any of its branches or departments, in this State, without first having a certificate of qualification from some authorized board of medical examiners, as hereinafter provided.

§ 2. That every person who may hereafter engage in the practice of medicine, in any of its branches or departments, in this State, shall, before entering upon such practice, furnish to the clerk of the district court of the county in which said practitioner may reside or sojourn, his certificate of qualification; and said clerk shall enter the name of said person in a well-bound book, kept in his office for that purpose, together with the time when, the place where, and the person or persons by whom such certificate of qualification was given, after which he shall return the said certificate to the owner thereof; for which service said clerk shall be entitled to receive from each, any and every such applicant the sum of one dollar.

§ 3. That the presiding judges of the district courts of the several judicial districts shall, at the first regular term of their courts after this act shall become a law, or as soon thereafter as practicable, severally appoint a board of medical examiners for their respective districts, to be composed of not less than three practicing physicians of known ability, and having certificates of qualification for the practice of medicine under the "Act to Regulate the Practice of Medicine," passed May 16, 1873, and said board of examiners to continue in office two years from and after their appointment; and they shall, immediately after accepting such appointment, elect one of their number president, and one as secretary, and adopt all necessary rules for the guidance and control of their meetings. It shall be the duty of said board of medical examiners to examine all applicants for certificates of qualification to practice medicine, in any of its branches or departments, in this State, whether such applicants are furnished with medical diplomas or not, upon the following named subjects, to-wit: anatomy, physiology, pathological anatomy and pathology, surgery, obstetrics and chemistry; said examination to be thorough. When the said board of medical examiners shall have been satisfied as to the qualifications of said applicant, they shall grant to him a certificate to that effect, which certificate shall be recorded with the clerk of the district court of the county in which said applicant may reside or sojourn, as provided in section two of this act, which certificate shall entitle him to practice anywhere in this State. Such board of examiners shall be entitled to receive the sum of fifteen dollars for each and every such applicant, to be paid by the applicant or party so examined; and two of them shall have authority to grant certificates, and whenever a vacancy occurs in any of said boards, the same shall be filled by appointment by the judge of the district in which such vacancy occurs.

§ 4. That said boards shall meet regularly semi-annually at some central point in their respective districts to conduct examinations and grant certificates, as hereinbefore provided, and they shall give at least one month's public notice of said meeting, by publication, in some paper published in the judicial district, specifying the time and place thereof: *Provided*, that any member of any of said boards shall have authority to grant temporary license or certificate to an applicant, upon examination, until the next regular meeting of the board, at which time the temporary license shall cease; but the said applicant must apply for a thorough examination. Each and every one of such boards shall procure a seal, as soon as practicable after their organization, which seal shall be impressed upon every certificate granted.

§ 5. That any person violating any of the provisions of this act shall be guilty of a misdemeanor, and on conviction thereof, before any court having competent jurisdiction, shall be fined in any sum not less than fifty dollars, and not more than five hundred dollars, for every such offense; one half of such fine shall be paid to the prosecutor, and the other half into the county treasury; and it shall be the duty of the judge of each judicial district, at each term of the district court in the respective counties composing his district, to charge the grand jury with the necessity of preserving this act inviolate, and to admonish them of their duty to find presentments against any and all persons guilty of its infraction: *Provided*, that nothing in this act shall be so construed as to exclude or disqualify any person who may have been already qualified for the practice of medicine under the act of May 16, 1873; *Provided*, that nothing in this act shall be so construed as to apply to those who have been regularly engaged in the general practice of medicine in this State, in any of its branches or departments, for a period of five consecutive years in this State prior to the first day of January, 1875; nor to those who have obtained certificates of qualification under said act; nor to females who follow the practice of midwifery, strictly as such.

§ 6. An act entitled "An act to regulate the practice of medicine," passed sixteenth of May, 1873, and all other laws or parts of laws in conflict herewith, are hereby repealed.

§ 7. It being important that the benefits of this act be realized at once, creates such imperative public necessity and an emergency as requires that it be of force and effect upon its passage, and it is so declared.

Approved August 21, 1876.

Article 396 of the Penal Code provides: If any person shall practice for pay, or as a regular practitioner, medicine in this State, in any of its branches or departments, or offer or attempt to practice without first having obtained a certificate of professional qualification from some authorized board of medical examiners, or without having a diploma from some accredited medical college, chartered by the legislature of the State or its authority, in which the same is situated, he shall be punished by fine of not less than fifty nor more than five hundred dollars.

Article 398. If any person shall hereafter engage in the practice of medicine in any of its branches or departments, for pay, or as a regular practitioner, without having first filed for record with the clerk of the district court of the county in which such person may reside or sojourn, a certificate from some authorized board of medical examiners, or a diploma from some accredited medical college, he shall be punished as prescribed in Article 396.

Approved March 26, 1879.

Dr. W. J. BURT, Secretary of the State Medical Association, writes:

We have laws, but they are not efficient. Any graduate of a chartered medical college is qualified, under our laws, to practice, by registering his diploma in the county clerk's or district clerk's office. This lets in, and qualifies, a man who holds a bogus or forged diploma. A non-graduate must be examined by a board appointed for each judicial district.

The profession have tried for four years to get an amendment to the law requiring every physician to be examined by a board in each congressional district, irrespective of diplomas, but the Solons of our State do not see it, and say, "let the people select and employ whom they please." We hope to get a more efficient and satisfactory law in 1884.

#### TEXAS MEDICAL COLLEGE AND HOSPITAL.

Galveston, Tex.

Organized in 1864.—Re-organized in 1873.—Formerly known as the Galveston Medical College. The last course of lectures was delivered in 1880-81.

## UTAH TERRITORY.

Population, 143 963. Number of physicians, 139. Number of inhabitants to each physician, 1035.

Dr. H. J. RICHARDS, of Salt Lake City, writes:

In answer to your letter I have to say that, so far as I know, we have in Utah no law regulating the practice of medicine. I think there is in the penal code one clause defining a punishment for the misdeeds of a physician while drunk. The inference is, that during the little time he is sober, he will not do much harm. Some of the incorporated cities regulate medicine within their limits by selling a license to any one who may apply for it.

In this city the qualifications needed to practice medicine are the possession of one dollar, and a willingness on the part of the would-be physician to contribute said one dollar to the city treasury. \* \* \* As for the medical fraternity proper, I do not think any of them care for any law regulating medicine. I believe they are advocates of the doctrine of the "survival of the fittest."

### MEDICAL INSTITUTION OF MORGAN CITY.

Morgan City, U. T.

Extinct.

## VERMONT.

Population, 332 236. Number of physicians, 659. Number of inhabitants to each physician, 504.

PRACTICE OF MEDICINE AND SURGERY, Chapter 172, Revised Laws, 1830.

SECTION 3908. Medical societies, organized under a charter from the general assembly, shall, at each annual session, elect a board of censors, consisting of three members, who shall hold their office till others are elected; which board may examine and license practitioners of medicine, surgery and midwifery.

§ 3909. A practitioner of medicine, surgery or midwifery, who, by sign or advertisement, offers his services to the public as practitioner of either medicine, surgery or midwifery, or who, by such sign or advertisement, assumes the title of doctor, shall obtain a certificate from one of such medical societies, either from a county, district or State society.

§ 3910. A person not a resident of this State, who has not received a diploma from a chartered medical college, shall obtain a certificate from a board of censors in this State before he shall be permitted to practice the medical art in this State.

§ 3911. Each board of censors shall issue certificates, without fee, to physicians and surgeons who furnish evidence, by diploma from a medical college or university, or by certificate of examination from an authorized board, which satisfies said censors that the person presenting such credentials has been, after due examination, deemed qualified to practice the branches mentioned in such diploma or certificate.

§ 3912. The censors of each medical college aforesaid shall, in their discretion, notify practitioners of medicine, surgery or midwifery of the terms of this chapter, and shall require such persons to comply therewith within thirty days after such notification, or within such further time as is allowed by the censors, not exceeding ninety days.

§ 3913. The certificate shall set forth that said censors have found the person to whom it is given qualified to practice the branches of medical art mentioned in it, and shall be substantially in the following form:

No. —.

Certificate.

STATE OF VERMONT, {  
COUNTY OF ———, }

This may certify that the undersigned board of censors have found A. B., of ———, in the county of ———, and State of ———, qualified in the following branches of the medical profession: ——— and ———; and therefore license him to practice said branches within this State.

\_\_\_\_\_,  
\_\_\_\_\_,  
\_\_\_\_\_

Board of Censors of Medical Society.

§ 3914. The person to whom a certificate is thus issued shall cause the same to be recorded in the clerk's office of the county in which he resides, or, if not a resident of the State, in the county in which he obtains such certificate, in a book to be kept by the county clerk for that purpose, and to be called the Medical Register of ——— County. The fee for recording such certificate shall be twenty-five cents.



§ 3915. A certificate issued by a board of censors, as herein provided, shall be valid throughout the State after being duly recorded. Said censors may revoke or annul a certificate if, in their judgment, the person holding it has obtained it fraudulently, or has forfeited the right to public confidence, by conviction of crime.

§ 3916. A person who practices medicine, surgery or midwifery in the State, or signs a certificate of death for purposes of burial or removal, unless authorized so to do by a certificate issued and recorded as herein provided, shall, for the first offense, be fined not less than fifty nor more than two hundred dollars, and for a subsequent offense not less than two hundred nor more than five hundred dollars, which fine may be recovered in an action of debt, for the use of any person who sues therefor, or by an indictment.

§ 3917. No person practicing either of the branches of medicine, surgery or midwifery within this State shall be permitted to enforce, in the courts, the collection of a fee or compensation for services rendered, or material or medicine furnished, in the practice of any of the branches for which he has not a certificate as provided in this chapter.

§ 3918. This chapter shall not apply to the practice of dentistry, nor to the practice of midwifery by women in the town or locality in which they reside, nor to those practitioners of medicine who had resided and practiced medicine in the State five years previous to November 28, 1836.

§ 2555. A physician who attended upon a deceased person shall leave with the town clerk a certificate containing the name of the disease or cause of such death within fifteen days after the interment of the deceased; and a medical attendant who fails to give such certificate shall be fined three dollars, for the use of the town where the offense is committed.

The professional books and instruments of a physician are exempt from taxation, and from attachment and execution.

#### MEDICAL DEPARTMENT OF THE UNIVERSITY OF VERMONT AND STATE AGRICULTURAL COLLEGE.

Burlington, Vt. (Pop. 11 365.)

Organized in 1823. The first class was graduated in 1823. Sessions were held and classes graduated annually, excepting in 1835, until 1837, when the sessions were suspended. In 1854 the department was reorganized. A class was graduated in 1854 and in each subsequent year.—The faculty embraces fourteen professors, one assistant professor, one instructor, one demonstrator, and one curator.

COURSE OF INSTRUCTION: A preliminary term of eighteen weeks' duration, and a regular term of seventeen weeks' duration, annually.—Consists of a complete course on the seven principal branches, and a short and practical course on the special branches. Clinics at hospital and dispensary. Three years' graded course recommended, but not required.—Lectures embrace general and special anatomy, obstetrics, diseases of women, materia medica, general pathology, principles and practice of surgery, chemistry, toxicology, theory and practice of medicine, microscopic anatomy, dermatology, diseases of children, ophthalmology, otology, thoracic diseases, diseases of the throat and nose, mental and nervous diseases, medical jurisprudence.

REQUIREMENTS: For admission, none.—For graduation: (1) twenty-one years of age; (2) three years' study; (3) two full courses in different years; (4) thesis; (5) good moral character; (6) satisfactory examination. "Graduates of other regular colleges, who desire a degree from this institution, must pass a satisfactory examination in the branches of medicine, surgery and obstetrics; and if they be graduates of more than three years' standing, they must exhibit a certificate of membership in some medical society entitled to representation in the American Medical Association."

FEES: Matriculation, \$5; lectures, \$70; graduation, \$25.

STUDENTS: Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1878	108	33	30 +
1879	140	49	35 —
1880	143	53	37 +
1881	171	50	29 +
1882	190	85	44.7

Average percent. of graduates to matriculates during the five years ended 1882, *thirty-five*.

Number of Illinois students attending the session of 1882, 1.

Number of graduates in Illinois, 18.

#### VERMONT MEDICAL COLLEGE.

Woodstock, Vt.

Organized in 18—. Extinct.

Number of graduates in Illinois, 12.

## VERMONT ACADEMY OF MEDICINE.

Castleton, Vt.

Organized in 1818. Suspended instruction from 1837 to 1841. Extinct since 1854. During its existence it graduated 350 students.

Number of graduates in Illinois, 27.

**VIRGINIA.**

Population, 1,512,565. Number of physicians, 1893. Number of inhabitants to each physician, 796.

Dr. J. L. CABELL, University of Virginia, furnishes the following:

Code of Virginia (1873.) Chapter 34, Section 8:

A separate license shall be granted to each member of a firm or company of attorneys at law, physicians, surgeons and dentists; and where the tax is estimated on the income from the professional business of a firm or company, if any part thereof is exempt from taxation, the exemption in favor of such firm or company shall apply to each member thereof.

§ 16. Provides that no abatement of tax be granted on licenses for one year.

§ 62. No person shall, without a license, practice as a physician, surgeon or dentist, for compensation; but a license to practice either profession shall confer the privilege of practicing in all the professions aforesaid, and a license granted to practice in any county or corporation, shall authorize such physician, surgeon or dentist to practice in any of the professions authorized throughout, the commonwealth without additional license. Any person violating the provisions of this section, or who shall practice in either of the professions named, without a license, shall pay a fine of not less than thirty dollars nor more than one hundred dollars for each offense, and shall be debarred from recovering any compensation for any such service, by suit or warrant, in any of the courts of the commonwealth.

Chapter 35, Section 51. The specific license tax on every physician, surgeon or dentist shall be ten dollars.

Chapter 104, Section 31. Every physician and surgeon shall, in a book to be kept by him, make a record at once of the death of every person dying in this State, upon whom he has attended at the time of such death, setting out, as far as practicable, the circumstances herein required to be recorded by an assessor or commissioner respecting deaths. He shall give to an assessor or commissioner of the revenue, whenever called upon by him for that purpose, annually, a copy of such record, so far as the same relates to deaths in such assessor's or commissioner's district.

The above statutes were enacted during the session of the Legislature of 1871-72.

Compensation for attending prisoners, and for making analyses in criminal cases, is prescribed by the following statute, enacted during the session of 1877-78:

A court may appoint a physician to attend prisoners in its jail, and make him a reasonable allowance, not exceeding seventy-five cents per day for each day he attends a patient. When he attends more than one patient a day, there may be allowed fifty cents per day for each additional patient. A court may make an allowance not to exceed the sum of twenty-five dollars, as compensation to any physician or analytical chemist, for making an analysis to discover poison in any criminal case.

**MEDICAL DEPARTMENT OF THE UNIVERSITY OF VIRGINIA,**

Near Charlottesville, Albermarle county.

(Pop. of University Town, 1000. Pop. of Charlottesville, 2676.)

Organized in 1825. The first class graduated in July, 1828. There was no graduating class in 1862.—The faculty embraces four professors and a demonstrator of anatomy.

**COURSE OF INSTRUCTION:** One annual course of thirty-four weeks' duration; daily examinations by the professors; optional courses in the chemical laboratory are given, fee charged, \$25 each. Course is graded extending over two years.—Lectures embrace, besides comparative anatomy, obstetrics and medical jurisprudence, the following scheme: The arrangement of the lectures is such that the student acquires a competent knowledge of anatomy, physiology and chemistry before he enters upon the study of the principles and practice of medicine and surgery, which can only be studied properly in the light shed upon them by the former. The instructions in materia medica and pharmacy are also given in due relation to the progress of the student in chemistry.

**REQUIREMENTS:** For admission, none.—For graduation. The degree of Doctor of Medicine is conferred upon such students as prove their fitness for the same by rigid and searching examinations. It has ever been the policy of the institution to make its honors

testimonials of merit, and not certificates of attendance upon a prescribed course of instruction. According to this policy the diploma is often conferred upon first-course students, if found worthy of it. The candidates for graduation are subjected to searching interrogations on the details and niceties as well as on the leading principles of the subject, and they are expected to be accurately versed in all the topics treated of in the lectures and correlative text. These examinations are chiefly in writing. The standing of the student at the daily and general examinations is taken into account in estimating his qualifications for graduation. As a proper acquaintance with the English language is indispensable to the attainment of any of the honors of the institution, all candidates for graduation are required to exhibit in their examination due qualifications in this respect."

**FEES:** Matriculation and library, \$30; tuition, \$100; demonstrator, \$10; graduation, \$15.

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentage of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1877-78	—	17	—
1878-79	—	21	—
1879-80	—	12	—
1880-81	57	13	22.8
1881-82	31	12	32.3
1882-83	56	16	28.6

Average percent. of graduates to matriculates during the past three years, *twenty-eight*.

Number of graduates in Illinois, 7.

#### MEDICAL SCHOOL OF THE VALLEY OF VIRGINIA,

(Winchester Medical College.)

Winchester, Va.

Organized in 1826. Lectures were probably delivered until the breaking out of the war, 1861, although no positive information is at hand regarding the date of its extinction.

#### MEDICAL COLLEGE OF VIRGINIA.

Richmond, Va. (Pop. 63 600.)

Organized in 1838 as the Medical Department of Hampden Sidney College, under which name it continued until 1851, when a new charter was obtained and the present name assumed. The first class was graduated in 1840. Classes have been graduated each subsequent year. The faculty embraces eight professors and ten adjunct professors.

**COURSE OF INSTRUCTION:** One annual course of twenty-four weeks' duration. Daily examinations by each professor or assistant. Clinics at hospital and dispensary. "The general plan and purpose of the course of instruction will be a judicious combination of the methods usually described as the didactic, with careful and abundant clinical and experimental illustration; thoroughness of instruction being the aim in all departments."—Lectures embrace practice of medicine, obstetrics, diseases of the puerperal state, diseases of women and children, physiology, pathology, surgery, chemistry, pharmacy, general and special anatomy, materia medica, therapeutics, diseases of the eye, ear and throat.

**REQUIREMENTS:** For admission, "An examination if considered necessary."—For graduation: not stated in announcement.

**FEES:** Matriculation, \$5; demonstrator, \$10; lectures, \$120; graduation, \$30.

**STUDENTS:** Number of matriculates and of graduates at the last session (being the only session concerning which the present Dean is able to give information,) and number of graduates of the session of 1881-82, obtained from the forty-fifth announcement—

Session.	Matriculates.	Graduates.	Percent.
1881-82	—	13	—
1882-83	*61	9	14.7

Percentage of graduates to matriculates, *fifteen*.

Number of graduates in Illinois, 4.

\*Includes pharmacy students.

## WASHINGTON TERRITORY.

Population, 75 120. Number of physicians, 152. Number of inhabitants to each physician, 494.

A law requiring the registration of physicians exists in this Territory, but it has been impossible to obtain a copy of it.

## WEST VIRGINIA.

Population, 618 457. Number of physicians, 939 (registered by State Board of Health, 1041.) Number of inhabitants to each physician, census basis, 658; registration basis, 594.

AN ACT amending and re-enacting Chapter 150 of the Code of West Virginia concerning the Public Health.

Be it enacted by the Legislature of West Virginia:

**SECTION 1.** There shall be a State board of health in this State, consisting of two physicians residing in each congressional district thereof, who shall be graduates of reputable medical colleges, and who shall have practiced medicine for not less than twelve years continuously. They shall be appointed by the Governor, and hold their office for the term of four years, unless sooner removed as provided in this chapter. But the members of said board now in office shall, unless sooner removed therefrom, remain in office until their successors are appointed and qualified. On the first day of June, 1882, and in every second year thereafter, or as soon after said day as possible, the Governor shall appoint two members of said board for the term of four years. Vacancies in said board shall be filled by the Governor for the unexpired term. Any person so appointed may be removed from office by the Governor, for incompetency, neglect of duty, gross immorality or drunkenness, or for any cause deemed necessary for the public good.

§ 2. The persons so appointed shall take the oath of office prescribed by the fifth section of the fourth article of the constitution of this State, before entering upon the duties of their office, and file a certificate of their having done so with the Secretary of State.

§ 3. The said board shall, on a day to be fixed by them, in every two years, elect from their own number a president and secretary, who shall hold their offices for the term of two years and until their successors are appointed and enter upon the duties of their office. The said board shall be a corporation by the name and style of "The State Board of Health of West Virginia," and have and use a common seal, and, as such corporation, may sue and be sued, contract and be contracted with, plead and be impleaded, to the extent of the powers conferred upon said board by this chapter. Said board may make and adopt all necessary rules, regulations and by-laws, not inconsistent with the constitution and laws of this State, or of the United States, to enable it to perform its duties and transact its business under the provisions of this chapter. A majority of said board shall constitute a quorum for the transaction of business. A meeting of the board may be called by the president or any three members thereof.

§ 4. The secretary shall be the recording officer of the board, and, in addition to his other duties prescribed in this chapter, he shall respond to all communications of the local boards of health, as well as from any member of said State board of health residing at a distance from his office, and give to them such advice and information relative to their duties as he may deem necessary and proper. He shall also do and perform such other duties as the State board of health may lawfully direct; and in case of the prevalence of endemics, epidemics, infectious and contagious diseases, or other unusual sickness, he shall, on the request of the local board of health, visit the locality and advise with them, and adopt such regulations for its suppression as may seem best. He shall annually report to the Governor, on or before the first day of January, the investigations, discoveries and recommendations of the board, which shall be printed and distributed as soon as practicable thereafter in the same manner as other public documents of the State, except that the Governor may cause said report to be printed and distributed annually.

§ 5. The board shall take cognizance of the interests of the life and health of the inhabitants of the State, and shall make, or cause to be made, sanitary investigations and inquiries respecting the causes of diseases, especially the endemics and epidemics and the means of prevention, the sources of mortality, and the effects of localities, employments, habits and circumstances of life on the public health. They shall also investigate the causes of diseases occurring among the stock or domestic animals in the State, the methods of remedying the same, and shall gather information in respect to these matters and kindred subjects for diffusion among the people. They shall also examine into and advise as to the water supply, drainage and sewerage of towns and cities; the ventilation and warming of public halls, churches, school houses, workshops and prisons; the ventilation of coal mines, and how to treat promptly accidents resulting from poisonous gases. When they may believe there is a probability that any infectious or contagious disease will invade this State from any other State, it shall be their duty to take such action and adopt and enforce such rules as they may, in the exercise of their discretion, deem efficient in preventing the introduction and spread of such disease or diseases. The better to accomplish such objects, the board are empowered to establish and strictly maintain quarantine at such places as they may deem proper, and may adopt rules and regulations to obstruct and prevent the introduction or spread of infectious or contagious



diseases to or within the State. They may enforce inspections of persons and articles of baggage, or other goods of whatsoever character, as well as the purification of the same; and companies or individuals operating or controlling railroads, passenger coaches, public conveyances, and steamers plying the Ohio river, or its tributaries in this State, shall obey the rules and regulations when made and published by the board in some newspaper printed at or near the place where the danger is; and any owner or person having charge of such railway train, passenger coach, steamboat, or public or private conveyance, who shall refuse to obey such rules and regulations when so made and published, shall be guilty of a misdemeanor, and for each offense be fined not less than fifty nor more than five hundred dollars, and be confined in the county jail not less than fifteen days nor more than two months, at the discretion of the court.

§ 6. It shall be the duty of the county court to nominate, and the said board to appoint, in each of the counties of this State, three intelligent and discreet persons residing therein, one of whom, at least, shall be a person qualified to practice medicine under the provisions of this chapter, if there be such person residing in the county, and the persons so appointed shall constitute a *local board of health* for the county of their residence, and hold their office for the term of two years, and until their successors are appointed, unless sooner removed from office by the State board of health. Vacancies in said local board shall be filled by the State board for the unexpired term upon the nomination of the county court. The said local board of health shall make and establish for their county, or for any district or place therein, such sanitary regulations and rules as they may deem necessary and proper to prevent the outbreak and spread of cholera, small-pox, scarlet fever, diphtheria and other endemic infectious and contagious diseases; and they or any of them may, except in the night time, in the performance of the duties imposed upon them, enter into or upon any house or premises and inspect the same whenever they have reason to believe that such house or premises is in an unclean or infectious condition; and if any house or premises so inspected be found in such condition as aforesaid, said local board shall direct and require the person in charge of or occupying the same, if of sufficient ability, to cleanse and purify the same according to the sanitary rules and regulations made by said board as aforesaid; and if any such person shall fail or refuse to comply with and obey the said directions and requirements of said board, he shall be guilty of a misdemeanor, and fined not less than ten nor more than one hundred dollars. Such local board shall also enforce within their county all the lawful rules and regulations of the State board of health applicable to such county.

It shall be the duty of every practicing physician in any county in which there is such local board of health, to report to said board promptly all or any diseases of the above named character under treatment by him; and said local board shall once, at least, in every three months, report to the State board of health the character of all such infectious, contagious, endemic or epidemic diseases; the number of persons reported as affected with either of said diseases, naming the same; the action taken by such local board to arrest the progress of every such disease, and the visible effects (if any) of such action. Where any city, town or village has a board of health of its own, the jurisdiction of the local board so appointed shall not extend thereto, but such city, town or village board of health shall be auxiliary to and act in harmony with the State board of health.

§ 7. The local board of health of any county may declare quarantine therein, or in any particular district, or place therein, against the introduction of any contagious or infectious disease prevailing in any other State, county or place, and of any and all persons and things likely to spread such contagion or infection. As soon as such quarantine is established, such local board shall, in writing, inform the members of the State board of health residing in their congressional district thereof, whose duty it shall be to ascertain as soon as practicable the necessity thereof, if any exist; and if they find that no such necessity exist, they shall declare the same raised. The said local board shall have power and authority to enforce such quarantine until the same is raised as aforesaid, or by themselves; and may confine any such infected person, or any person likely to spread such contagion or infection, to the house or premises in which he or she resides, or if such person have no residence in the county, at a place to be provided by them for the purpose; and if it shall become necessary to do so, they shall summon a sufficient guard for the enforcement of their orders in the premises.

Every person who shall fail or refuse to comply with any order made by such board under this section, and every person summoned as such guard who shall, without a lawful excuse, fail or refuse to obey the orders and directions of such board in enforcing said quarantine, shall be guilty of a misdemeanor, and for each offense be fined not less than twenty-five nor more than one hundred dollars. In cases of emergency or of actual necessity, and when the court or corporate authority are from any cause unable to meet or to provide for the emergency or the necessity of the case, all actual expenditures necessary for local and county sanitation as provided for in this section, shall be certified by the local board of health to the county court, and the whole or as much thereof as the said court may deem right and proper shall be paid out of the county treasury. The board of health of any city, town or village, shall have the same powers and perform the same duties herein conferred upon and required of the local board of health in their county. The State board of health may also, under the provisions of this section, declare quarantine in any part of the State, and all the provisions of this section shall be applicable to the quarantine so declared.

§ 8. The State board of health, its agents and employees, and the local boards of health, in the absence of the State board, its agents and employees, when they have reason to believe that any steamboat or other water craft navigating the Ohio river or its tributaries in this State, or any other of the waters of the State, or bordering thereon, is infected with any contagious or infectious disease, may prevent the landing of such boat or craft at any point in this State. They may also, if they have reason to believe that any railroad train, coach or other vehicle, passing on or along any railroad in this State, contains any person or thing infected with contagious matter, detain at any station or point on such railroad, where it can be done with safety, such train, coach or vehicle, for a time

sufficient to examine the same, and if found to be so infected, for a time sufficient to disinfect and purify the same; and if the conductor or person in charge of such train, coach or vehicle, shall wilfully fail or refuse to stop the said train, coach or vehicle for the time aforesaid, he shall be guilty of a misdemeanor and punished as prescribed in section five (5) of this chapter. Nothing herein contained shall be so construed as to impair or affect the powers and duties of the county court of any county under the provisions of sections twenty-five (25) and twenty-six (26) of chapter thirty-nine of the code of West Virginia as amended and re-enacted by chapter five of the acts of one thousand eight hundred and eighty-one.

§ 9. The following persons, and no others, shall hereafter be permitted to practice medicine in this State, viz :

*First.* All persons who are graduates of a reputable medical college in the school of medicine to which the person desiring to practice belongs. Every such person shall, if he have not already done so and obtained the certificate hereinafter mentioned, present his diploma to the State board of health, or to the two members thereof in his congressional district; and if the same is found to be genuine, and was issued by such medical college as is hereinbefore mentioned, and the person presenting the same be the graduate named therein, the said board or said two members thereof (as the case may be) shall issue and deliver to him a certificate to that effect; and such diploma and certificate shall entitle the person named in such diploma to practice medicine in all its departments in this State.

*Second*—All persons who have practiced medicine in this State, continuously for the period of ten (10) years prior to the eighth day of March, one thousand eight hundred and eighty-one. Every such person shall make and file with the two members of the State board of health, in the congressional district where he resides, or if he reside out of the State, in the district nearest his residence, an affidavit of the number of years he has continuously practiced in this State, and if the number of years therein stated be ten (10) or more, the said board or said two members thereof, shall, unless they ascertain such affidavit to be false, give him a certificate to that fact, and authorizing him to practice medicine in all its departments in this State.

*Third*—A person who is not such graduate and who has not so practiced in this State for a period of ten (10) years, desiring to practice medicine in this State, shall, if he have not already done so, present himself before the State board of health, or before the said two members thereof in the congressional district in which he resides, or if he reside out of this State, to the said two members of the State board of health in the congressional district nearest his place of residence, who, together with a member of the local board of health who is a physician (if there be such member of the local board) of the county in which such examination is held, shall examine him as herein provided; and if upon full examination they find him qualified to practice medicine in all its departments, they, or a majority of them, shall grant him a certificate to that effect, and thereafter he shall have the right to practice medicine in this State to the same extent as if he had the diploma and certificate hereinbefore mentioned.

The members of the State board of health in each congressional district shall, by publication in some newspaper printed in the county in which their meeting is to be held, or if no such paper is printed therein, in some newspaper in general circulation in such district, give at least twenty-one days' notice of the time and place at which they will meet for the examination of applicants for permission to practice medicine, which notice shall be published at least once in each week for three (3) successive weeks before the day of such meeting. But this section does not apply to a physician or surgeon who is called from another State to treat a particular case, or to perform a particular surgical operation in this State, and who does not otherwise practice in this State.

§ 10. Every person holding any such certificate as is hereinbefore provided for, shall have the same recorded in the office of the secretary of the State board of health, in a book kept by him for that purpose, and the secretary shall endorse on said certificate the fact of such recordation, and deliver the same to the person named therein, or to his order.

§ 11. Every person on presenting himself for examination as hereinbefore provided, shall pay to the State board of health, or to the members thereof by whom he is examined, a fee of ten (10) dollars, which shall not be returned if a certificate be refused him. But he may again at any time within one year after such refusal present himself for examination as aforesaid, without the payment of an additional fee, and if a certificate be again refused him, he may as often as he see fit thereafter, on the payment of a fee of ten (10) dollars, be examined as herein provided until he obtain such certificate.

§ 12. Examinations may be in whole or in part in writing, and shall be of an elementary and practical character, and shall embrace the general subjects of anatomy, physiology, chemistry, materia medica, pathological anatomy, surgery and obstetrics, but sufficiently strict to test the qualifications of the candidate as a practitioner of medicine, surgery and obstetrics. The provisions of this chapter shall not apply to females practicing midwifery.

§ 13. Any person shall be regarded as practicing medicine within the meaning of this chapter who shall profess publicly to be a physician, and to prescribe for the sick, or who shall append to his name the letters "M. D." This act shall also apply to apothecaries and pharmacists who prescribe for the sick. This act shall not apply to commissioned officers of the United States army and navy and marine-hospital service.

§ 14. Any itinerant physician desiring to practice medicine in this State, shall, before doing so, pay to the sheriff of every county in which he desires to practice, a special tax of fifty dollars for each month and fraction of a month he shall so practice in such county, and take his receipt in duplicate therefor. He shall present said receipts to the clerk of the county court of such county, who shall file and preserve one of them in his office, and endorse on the other the words: "A duplicate of this receipt has been filed in my office,"

and sign the same and deliver it to the person presenting the same; and if any such physician shall practice, or attempt to practice medicine in any such county without having paid such tax and filed such receipt with the clerk of the county court and obtained his endorsement on the other as aforesaid, or if he shall so practice or attempt to practice for a longer period than that for which he has paid such tax as aforesaid, he shall be guilty of a misdemeanor and be fined not less than one hundred nor more than five hundred dollars. Any person who shall travel from place to place and by writing, printing or otherwise, publicly profess to cure or treat diseases, injuries or deformities, shall be held and deemed to be an itinerant physician and subject to the taxes, fines and penalties prescribed in this section.

§ 15. If any person shall practice, or attempt to practice medicine, surgery or obstetrics in this State without having complied with the provisions of section nine (9) of this chapter, except as therein provided, he shall be guilty of a misdemeanor and fined for every such offense not less than fifty nor more than five hundred dollars, or imprisoned in the county jail not less than one month nor more than twelve months, or be punished by both such fine and imprisonment, at the discretion of the court. And if any person shall file or attempt to file as his own, the diploma or certificate of another, or shall file or attempt to file a false or forged affidavit of his identity, or shall wilfully swear falsely to any question which may be propounded to him on his examination, as herein provided for, or to any affidavit herein required to be made or filed by him, he shall, upon conviction thereof, be confined in the penitentiary not less than one nor more than three years, or imprisoned in the county jail not less than six nor more than twelve months, and fined not less than one hundred nor more than five hundred dollars at the discretion of the court.

§ 16. The secretary of the State board of health shall receive a salary to be fixed by the board, but not to exceed the sum of five hundred dollars; he shall also receive his traveling and other necessary expenses incurred in the performance of his official duties within the limits of this State, not to exceed, however, one hundred dollars. The other members of said board shall each receive four dollars per day for each day actually and necessarily employed by them in the discharge of the duties of their office. But the whole of the expenses so incurred, the salary of the secretary and the per diem of the members of the board, shall not exceed the sum of fifteen hundred dollars in any one year. The State board shall audit all bills made out in due form and verified by the member rendering the services, or incurring the expense, or traveling in the performance of the duties of his office. Such bills, when approved by the Governor, shall be paid out of the State treasury.

§ 17. All moneys received by the State board of health, or any of its members, in payment of fees for examination, as well as the special taxes received by the sheriff under the provisions of section fourteen (14) of this chapter, shall be paid into the State treasury within one month after the same are received. And it shall be the duty of the secretary of the State board of health on the first days of January and July in each year, or within five days thereafter, to certify to the auditor all such moneys received by said board or any member thereof, during the preceding six months. It shall also be the duty of the clerk of every county court on the same days in each year, or within five days thereafter, to certify to the auditor all moneys received by the sheriff under this chapter shown by the receipts filed in his office, as required by section fourteen (14) of this chapter. And any such secretary or clerk who shall fail to comply with the provisions of this section, shall be guilty of a misdemeanor and fined for each offense not less than fifty nor more than two hundred dollars. And if any member of the State board of health shall fail to account for and pay into the treasury, as herein required, any moneys received by him as aforesaid, he shall be guilty of a misdemeanor and fined double the amount of the moneys so received, and which he has failed to pay as aforesaid.

§ 18. The secretary of the State board of health, or any member thereof, shall have power to administer oaths and take and certify affidavits in any matter or thing pertaining to the business of the board, or of any of the members thereof.

§ 19. If any person knowingly sell any diseased, corrupted or unwholesome provisions, whether food or drink, without making the same known to the buyer, he shall be confined in jail not more than six months, and fined not exceeding one hundred dollars.

§ 20. If any person fraudulently adulterate, for the purpose of sale, anything intended for food or drink, or if he knowingly sell or barter anything intended for food or drink, which is not what it is represented to be, or what it is sold for, he shall be confined in jail not more than one year, and fined not exceeding five hundred dollars; and the adulterated or other articles shall be forfeited and destroyed.

§ 21. All acts and parts of acts coming within the purview of this act, and inconsistent therewith, are hereby repealed.

Approved March 25, 1882, and in force from that date.

Governor JACKSON, in his biennial message to the Legislature, dated January 20, 1883, refers to the board of health of the State as follows:

The law establishing the State Board of Health and regulating the practice of medicine and surgery, as amended and re-enacted last winter, has proved a wise act of legislation. It is admirably adapted to secure the protection of the lives, health, prosperity and happiness of all classes of the people. The law is now in force in every county of the State, and we may reasonably expect that its operations will prove of much benefit.



**WISCONSIN.**

Population, 1,315,497. Number of physicians, 1549. Number of inhabitants to each physician, 849.

**AN ACT to Prevent Quacks from Deceiving the People by Assuming a Professional Title.**

The People of the State of Wisconsin, represented in Senate and Assembly, do enact as follows:

**SECTION 1.** No person practicing physic or surgery, or both, who is prohibited by section one thousand four hundred and thirty-six of the Revised Statutes of Wisconsin, 1878, from testifying in a professional capacity, as a physician or surgeon, in any case, shall assume the title of doctor, physician or surgeon, by means of any abbreviation, or by the use of any word or words, letters of the alphabet of the English or any other language, or any device of whatsoever kind, printed, written or painted, or exhibited in any advertisement, circular, hand-bill, letter or other instrument, nor on any card, sign, door or place whatsoever. Any person violating any provision of this act shall be deemed guilty of a misdemeanor, and shall, on conviction thereof, be punished by a fine of not less than twenty-five dollars, nor more than one hundred dollars, or by imprisonment in the county jail not less than ten days, nor more than sixty days, for each offense.

**§ 2.** Upon complaint made, in writing, under oath, before any magistrate or justice of the peace, charging the commission of an offense against the provisions of this act in his county, it shall be the duty of the district attorney to prosecute the offender, and in all such prosecutions the burden of proof shall be upon the defendant to establish his right to use such title, under the provisions of this act.

**§ 3.** Any person prohibited by section one of this act from assuming the title of doctor, physician or surgeon, who shall practice, or pretend to practice, physic or surgery, or both, shall not be exempted from any, but shall be liable to all, of the legal penalties and liabilities for malpractice; and ignorance shall be no excuse for failing to perform, or for negligently or unskillfully performing, or attempting to perform, any of the duties required by law of practicing physicians or surgeons.

**§ 4.** Every person pretending to practice physic or surgery, or both, shall, upon demand of any person, exhibit all diplomas or licenses that he may have to practice physic or surgery, or both; and if such person, upon demand, shall refuse to exhibit such diplomas or licenses, any suit instigated against him under this chapter shall not be considered malicious.

**§ 5.** This act shall take effect from and after its passage and publication.

Approved March 30, 1881.

Section 1436 of the Revised Statutes of Wisconsin, referred to in the above law, reads as follows:

**§ 1436.** No person practicing physic or surgery, or both, shall have the right to collect in any action, in any court, fees or compensation for the performance of any medical or surgical service, or to testify in a professional capacity as a physician or surgeon in any case, unless he shall have received a diploma from some incorporated medical society or college, or shall be a member of the State or some county medical society legally organized in this State.

Medical societies are empowered to issue diplomas by the following:

**§ 1425.** [Revised Statutes.] The censors of each medical society shall carefully and impartially examine all medical students who shall present themselves as candidates for a diploma and membership of such society, and report their opinion in writing to the president; and thereupon the society may grant diplomas to the persons so examined, under the hand of the president and the seal of the society, which diploma shall constitute them members of such society; but no person shall be so examined and no diploma shall be issued to any person unless he shall have arrived at the age of twenty-one years, have a good English education, have studied medicine at least three years with some respectable practitioner, and shall produce satisfactory evidence of a good moral character. Every person receiving a diploma from any such medical society shall pay therefor ten dollars to the treasurer thereof.

J. T. REEVE, M.D., Secretary State Board of Health of Wisconsin, writes:

This is the only law we have on the subject. I do not know how the impression has gone abroad, as it has, that we have a law regulating the practice of medicine, for we have none.

**MILWAUKEE COLLEGE OF PHYSICIANS AND SURGEONS.**

Milwaukee, Wis. (Pop., 115,587.)

See List of Institutions not recognized by the ILLINOIS STATE BOARD OF HEALTH.

No date of organization is given in the announcement. The second annual announcement (dated 1882, which would indicate that the institution was organized in 1881,) says: "This college is incorporated under the general law of the State of Wisconsin. Its faculty have full power to issue diplomas of medicine and surgery, and are possessed of all rights and privileges granted, or that may be granted, to colleges in the country."

It is also stated that "the qualifications requisite for graduation from this college will be of the highest standard, and efforts will be constantly made to render the course of instruction still more thorough and comprehensive."



What is considered the "highest standard" of qualifications requisite for graduation is shown in the following paragraphs from the announcement:

"Provided, however, since many States have legalized the status of practitioners by examining boards, therefore, any person otherwise qualified, and holding certificates of fitness or authority to practice from any State board of health, may become an applicant for graduation by attending a single course of lectures in this college."

"Likewise, practitioners of five years of reputable and consecutive practice, upon furnishing a certificate of the fact from the county clerk and three good and reputable citizens, according to the following form, may become applicants for the honors of the school, upon attendance of one full term of lectures and passing a satisfactory examination."

Upon this, and other evidence of irregularities, the ILLINOIS STATE BOARD OF HEALTH has refused to recognize the diplomas of this institution; and its methods, the personnel of the faculty and general character, were fully exposed in the report of the Secretary to the BOARD, at its regular quarterly meeting in June, 1883. Since that exposure, the Attorney General of Wisconsin has taken steps to cause the charter of this college to be declared forfeited for fraudulent and illegal practices. The institution has also been known by the name of "The Coney Medical Institute."

## WYOMING TERRITORY.

Population, 20,789. Number of physicians, 30. Number of inhabitants to each physician, 693.

AN ACT to Prevent the Practice of Medicine, Surgery or Obstetrics by Unqualified Persons.

Be it enacted by the Council and House of Representatives of the Territory of Wyoming:

SECTION 1. No person shall practice medicine, surgery or obstetrics in this territory, who has not received a medical education and a diploma from some regularly chartered medical school, said school to have a *bona fide* existence at the time when said diploma was granted.

§ 2. Every physician, surgeon or obstetrician in this territory shall file for record with the registrar of deeds of the county in which he or she is about to practice his or her profession, or where he or she now practices it, a copy of his or her diploma, at the same time exhibiting the original, or a certificate from the dean of the medical school of which he or she is a graduate, certifying to his or her graduation.

§ 3. Every physician, surgeon or obstetrician when filing a copy of his or her diploma or certificate of graduation, as required by section two of this act, shall be identified as the person named in the papers about to be filed, by the affidavit of two citizens of the county, or by his or her affidavit, taken before a notary public or commissioner of deeds for this territory, which affidavit shall be filed in the office of the registrar of deeds.

§ 4. Any person practicing medicine, surgery or obstetrics in this territory without complying with sections one, two and three of this act, shall be guilty of a misdemeanor, and, upon conviction, shall be punished by a fine of not less than fifty dollars, nor more than five hundred dollars, or by imprisonment in the county jail for a period of not less than thirty days, nor more than six months, or by both fine and imprisonment for each and every offense. And any person filing or attempting to file as his or her own, the diploma or certificate of graduation of another, or a forged affidavit of identification, shall be guilty of a felony, and, upon conviction, shall be subject to such fine and imprisonment in the penitentiary as may be fixed by the court for said offense.

§ 5. It shall be the duty of the police, sheriff or constable to arrest all persons practicing medicine, surgery or obstetrics in this territory, who have not complied with the provisions of this act, and the officer making the arrest shall be entitled to one-half of the fine collected.

§ 6. No portion of this act shall apply to any person who, in an emergency, may prescribe or give advice in medicine, surgery or obstetrics, in a section of country where no physician, surgeon or obstetrician resides, or where no physician, surgeon or obstetrician resides within convenient distance, nor to persons prescribing in their own family; nor shall the provisions of this act apply to persons claiming to practice medicine, surgery or obstetrics in any section of the territory wherein no physician or surgeon, having a diploma or certificate of graduation as aforesaid, now resides or shall hereafter reside.

§ 7. Upon the trial of any person charged with a violation of any of the provisions of this act, it shall be sufficient for the prosecution to show that the defendant has practiced medicine, surgery or obstetrics within the county where the indictment is found, at any time since the passage of this act, and the defendant shall not, after such proof, be entitled to an acquittal until he or she shows by the testimony of some competent witness, upon oath, that the defendant has received a medical education and a genuine diploma from some regularly chartered medical school: *Provided*, that the defendant may show such facts by depositions taken in the same manner as depositions are taken in civil cases.

§ 8. That an act entitled "An act to protect the citizens of Wyoming Territory from empiricism, and to elevate the standing of the medical profession," be and the same is hereby repealed.

§ 9. This act shall take effect and be in force from and after its passage.

Dr. J. H. FINFROCK, of Laramie City, writes :

I believe our law is efficient, although it has never been tested in our higher courts. Several arrests have been made under it, but the parties either left before trial or ceased to practice. As no attempt has ever been made to repeal the law, I conclude it is favorably received by all classes. Physicians are exempt from jury duty, and receive ten dollars per day when testifying before a coroner's jury, and thirty dollars for making a post mortem examination.

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# ADDENDA.

## MEDICAL COLLEGE OF GEORGIA.

*Medical Department of the University of Georgia.*

Augusta. (Pop. 21 891.)

Organized in 1829, as a Medical Academy, and has been in constant operation ever since, except during the period of the war. In 1873 it became the Medical Department of the State University.—The faculty embraces two emeritus professors, six professors, six lecturers, a demonstrator and prosector, an assistant demonstrator, and eight dispensary and clinical assistants.

**COURSE OF INSTRUCTION:** One annual graduating course, beginning November 1 and ending March 1—seventeen weeks. Graded course of three terms recommended, but not required.—Lectures embrace obstetrics and diseases of women and children; medical chemistry and pharmacy; surgery and gynecology; anatomy and operative surgery; physiology and pathology; materia medica, therapeutics, and medical jurisprudence; practice and institutes of medicine; skin and venereal diseases; diseases of the eye; throat and ear diseases; physical diagnosis.

**REQUIREMENTS:** For admission, none.—For graduation: "A candidate for the degree of Doctor of Medicine must have attended two full courses in this, or one in this and one in some other college in good standing. No student of immoral character will be admitted for examination."

**FEES:** Matriculation (once) \$5; tickets of full course, \$75; practical anatomy (once) \$10; diploma, \$30.—Where the graded course of three terms is followed, the usual fees are charged for the first and second terms, but the third is offered gratuitously. Two students from each Congressional district of the State are admitted gratuitously, and a limited number of beneficiaries are received from South Carolina.

**STUDENTS:** No lists of matriculates and graduates have been received. At the commencement in 1883, a class of 21 was graduated.

**REMARKS:** In the last edition of this Directory, it was stated that no reply had been "received to repeated requests for information. College probably extinct." While this edition is going through the press, the fifty-second annual announcement is received, from which the foregoing data have been obtained.

## NORTHWESTERN MEDICAL COLLEGE OF ST. JOSEPH.

St. Joseph, Mo.

At a meeting of the Board of Incorporators of the Northwestern Medical College of St. Joseph, held September 24, 1883, it was unanimously

*Resolved*, That this school be hereafter governed, as to its requirements, by the Schedule furnished and adopted by the ILLINOIS STATE BOARD OF HEALTH, as "the minimum requirements" for the conduct of medical colleges; and that in future only such applicants as come up to the standard thus established will be admitted to the classes of the Northwestern Medical College.

## NEW YORK MEDICAL COLLEGE AND HOSPITAL FOR WOMEN, (*Homeopathic*).

New York City.

[SEE New York, page 117.]

**STUDENTS:** Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Percent.
1879-80	29	7	29 +
1880-81	34	5	14.7
1881-82	41	10	24.3
1882-83	42	8	19 +

Average percentage of graduates to matriculates during the past four years, *twenty*.

## MEDICAL DEPARTMENT OF SHAW UNIVERSITY.

(Leonard Medical School.)

Raleigh, N. C.

Organized in 1881. For colored students.—The faculty consists of three professors.

**COURSE OF INSTRUCTION:** Provision is made for a regular four years' graded course, arranged as follows: First year—anatomy, physiology, and general chemistry. Second year—practical anatomy, medical chemistry, materia medica, pathological anatomy, practice of medicine and surgery. Third year—therapeutics, obstetrics, theory and practice of medicine and surgery. Fourth year—ophthalmology, otology, dermatology, syphilis, laryngology, diseases of the nervous system, — of women, — of children, operative surgery, and forensic medicine.

The four years' course is not obligatory, but it is recommended, "and no student will receive a degree unless he can pass a satisfactory examination in all the branches pursued in the four years' course." Students are divided into four classes, according to the number of years' study; and those who come from other schools "will be classified according to their previous study and medical knowledge."

For the benefit of such students as wish to enter upon the study of medicine, and yet lack the required preparation, arrangements are made for a two years' course, preliminary to the regular course. This includes instruction in Latin, botany, physics, zoology, chemistry, physiology, and the use of the microscope.

**REQUIREMENTS:** For admission, eighteen years of age; preliminary examination "sufficient to show their fitness to enter upon the study of medicine," or certificate of "previous standing in school from some principal or president of a reputable institution of learning."—For graduation: satisfactory evidence of good moral character; twenty-one years of age; three years' study of medicine, or attendance on the four years' graded course; two full courses of lectures at some regular medical school, the last at this institution; dissection of the entire cadaver; thesis; satisfactory examination in all branches.

**FEES:** Matriculation (paid annually), \$5; five months' course of lectures, \$60; ticket for any one branch, \$15; graduation fee, \$20. Students having paid for three courses at this school are admitted to subsequent courses on payment of matriculation fee only.

**STUDENTS:** The class of 1881-82 numbered 3 second-year, and 8 first year men—total. 11. One of the second-year men was also a student in the Classical Department of the University, and was graduated at the commencement, May, 1883, with the degree of A.B. —The class of 1882-83 numbered 3 third-year, and 8 second-year men. No graduates.

Thus far, all the students are taking the four-year graded course.

**REMARKS:** Students are roomed and boarded at the University, the charges being, for room rent, lights and fuel, \$2 per month; and for board, \$6 per month.—Students of the Medical Department enjoy the benefits of the University library, and the lectures and general exercises of the other departments.—If a candidate for graduation fail to pass, "he may have a second trial, which shall be final; failing in this, his graduation fee shall be returned to him, and he may try again at the next annual examination, after having taken another course of lectures."—There are five regular scholarships, known as the "Leonard Medical Scholarships," open to "needy and meritorious young men;" and five more promised for the session of 1883-84.

The announcement, from which the foregoing data have been obtained, was received too late for use in the regular order. See North Carolina, page 124.

## MEDICO-CHIRURGICAL COLLEGE OF PHILADELPHIA.

Philadelphia, Pa.

Since the summary of this institution was printed, a letter from Dr. GEO. P. OLIVER (September 24, 1883,) has been received, giving the number of matriculates for 1882-83,—so that the item "Students" (see page 139) should read as follows:

Session.	Matriculates.	Graduates.	Percent.
1881-82	31	3	9.6
1882-83	27	10	37.4

Average percentage of graduates to matriculates, during the two years of the existence of this college, *twenty-two*.

Dr. OLIVER adds that of the 27 matriculates at the last session, 14 were third-course, 9 were second-course, and 4 were first-course students.



[IN ADDITION to the institutions conferring degrees, the following facilities are offered to practitioners and post-graduates:]

#### NEW YORK POLYCLINIC.

New York City.

Organized in 1882.—Faculty consists of sixteen professors and two adjunct professors, besides which there are thirty-seven assistants to the faculty.

Clinics are held daily throughout the year, in diseases of the chest; — of children; — of the throat, nose and ear; — of the nervous system; — of the skin; — of the eye; in general medicine; surgery; gynecology; and orthopedic surgery.

FEES: Except for general and operative surgery, and for diseases of women (which are \$25 each), and for diseases of the eye (which is \$20), the tickets are \$15 for each department, and are good for six weeks after date of issue.

REMARKS: This is strictly a school of clinical medicine and surgery. There are no didactic lectures, and none but practitioners are admitted.

#### NEW YORK POST-GRADUATE MEDICAL SCHOOL.

New York City.

Organized in 1882.—Faculty consists of eleven professors and six associate professors.

Clinics held daily in clinical and operative surgery; diseases of the mind and nervous system—of the eye and ear—of the nose and throat—of the skin, genito-urinary organs and venereal diseases—of women—of children; orthopedic surgery and mechanical therapeutics; pathology and general medicine; obstetrics and operative midwifery.

FEES: General ticket, for a full course in all the departments, from May 1 to October 1, \$50; partial ticket, for any four courses, \$20.

REMARKS: Instruction is entirely clinical. Certificates of attendance are issued for any seven weeks of continuous study.

#### PHILADELPHIA POLYCLINIC AND COLLEGE FOR GRADUATES IN MEDICINE.

Philadelphia, Pa.

Organized in 1882. Clinical and practical instruction in medical and surgical specialties, to physicians only, is given during the entire year. In addition to the clinical facilities of the college, the services of the Philadelphia, Pennsylvania, Wills, Howard, Orthopedic and Presbyterian hospitals, with which members of the faculty are connected, will be utilized for instruction. Clinical instruction in electro-therapeutics is given, and the laboratories of pathology, microscopy and chemistry are open during the entire year.

FEES: "Pupils will have an opportunity of attending the daily clinics from May 28 to September 30, inclusive, for a fee of \$20 in each department."

#### COLLEGE FOR MEDICAL PRACTITIONERS.

St. Louis, Mo.

Organized in 1882. The objects of this college are to afford medical practitioners, graduates and non-graduates the opportunity of reviewing their collegiate studies and of receiving additional practical instruction in the several specialties of medicine and surgery. Three sessions, each of five weeks' duration, annually.

A diploma of associate membership is conferred under the following conditions:

- 1st. They must have attended a full course of lectures and the clinics of all the departments of this college.
- 2d. Must be a graduate of some recognized and reputable medical school.
- 3d. Must apply in their own handwriting for examination.
- 4th. Must have passed a satisfactory examination in all the branches taught in this college.

5th. And must present to the college a prepared physiological or pathological specimen (wet or dry), or a cast or drawing, with the name, address and the alma mater of the applicant attached. The fee for this diploma is \$25.

Persons who are not graduates of any medical college may attend the lectures in this college, and may receive a certificate of attendance, provided that they present to the college a prepared pathological or physiological specimen (wet or dry) or a drawing.



## SUMMARY AND ANALYSIS.

## A.—SUMMARY OF INSTITUTIONS AND STUDENTS.

I. INSTITUTIONS.		Regular	Homeopathic	Eclectic	Physio-Med.	Miscellaneous	Fraudulent	Totals
		.....	.....	.....	.....	.....	.....	.....
*Total number of institutions accounted for .....		154	19	24	4	16	14	231
— — in the United States .....		139	19	24	4	16	14	216
— — in Canada .....		15						15
Total number whose diplomas or licenses have been presented to the ILLINOIS STATE BOARD OF HEALTH .....		85	14	12	3	2	10	126
— — in the United States .....		79	14	12	3	2	10	120
— — in Canada .....		6						6
Total number of such institutions recognized by the ILLINOIS STATE BOARD OF HEALTH prior to the session of 1883-84 .....		83	15	6	3			107
— — in the United States .....		77	15	6	3			101
— — in Canada .....		6						6
Total number of such institutions heretofore recognized conditionally, all in the United States .....				4	2	3		9
Total number of institutions now in existence .....		103	13	15	2	3		136
— — in the United States .....		91	13	15	2	3		124
— — in Canada .....		12						12
Total number of colleges heretofore exacting an educational requirement as a condition of matriculation .....		41	4					45
— — in the United States .....		30	4					34
— — in Canada .....		11						11
Total number of colleges now exacting an educational requirement as a condition of matriculation .....		73	11	7	2	1		94
— — in the United States .....		61	11	7	2	1		82
— — in Canada .....		12						12
Total number of colleges heretofore requiring attendance on three or more courses of lectures before graduation .....		21	1					22
— — in the United States .....		10	1					11
— — in Canada .....		11						11

\* This includes four (4) examining and licensing bodies, which do not give instruction; and four (4) schools which do not confer degrees.

Post-graduate and auxiliary institutions and courses—seventeen (17) in number—are not included in this summary.

*Summary of Institutions and Students—Continued.*

I. INSTITUTIONS.	Regular.....	Homeopathic.....	Eclectic.....	Physio Med.....	Miscellaneous.....	Fraudulent.....	Totals.....
Total number of colleges now requiring attendance on three or more courses of lectures before graduation.....	28	2					30
— — in the United States.....	16	2					18
— — in Canada.....	12						12
Total number of colleges recommending and providing for, but not requiring attendance on three or more courses of lectures before graduation—all in the United States.....	43	7	2	1			53
Total number of colleges formerly having chairs of hygiene.....	32	7	3				42
— — now having chairs of hygiene.....	50	8	7	2			67
Total number of colleges formerly having chairs of forensic medicine.....	49	8	4				61
— — now having chairs of forensic medicine.....	58	11	9	2	1		81
Total number of colleges requiring a thesis as a condition of graduation.....	35	4	6				45
Total number of colleges for women only.....	6	2					8
— — in the United States.....	4	2					6
— — in Canada.....	2						2
Total number of colleges for both sexes (United States)...	23	7	8	2			40
Total number of colleges for colored students only (U. S.).	4						4
Total number of colleges for both white and colored students.....	1						1



## Summary of Institutions and Students—Continued.

II.—STUDENTS.	Regular	Homeo.	Eclectic	Ph-Med	Totals...
Total number of matriculates—session of 1882-3.....	11,095	1,204	872	52	13,219
— in the United States.....	10,235	1,204	872	52	12,363
— in Canada.....	856				856
Total number of graduates—session of 1882-3.....	3,360	437	288	23	4,408
— in the United States.....	3,496	437	288	23	4,244
— in Canada.....	164				164
Percentages of graduates to matriculates.....	32.8	36.2	33.0	44.2	33.1
— in the United States.....	33.9	36.2	33.0	44.2	34.1
— in Canada.....	19.1				19.1
Highest per cent. of graduates, by States—in the U. S.....	44.4	43.5	58.3	46.1	
— in Canada.....	23.0				
Lowest per cent. of graduates, by States—in the U. S.....	12.5	26.8	28.4	33.3	
— in Canada.....	7.3				
Highest per cent. of graduates, by individual colleges—U. S.....	58.0	50.9	58.3	46.1	
— in Canada.....	23.0				
Lowest per cent. of graduates, by individual colleges—U. S.....	5.2	27.0	28.2	33.3	
— in Canada.....	7+				

## III.—DURATION OF LECTURE TERMS.

Schools.	Weeks.																				Totals.....
	16	17	19	20	21	22	23	24	25	26	27	30	31	32	33	34	35	36	38	39	
Regular, United States	2	2	2	9	21	8	6	9	1	11	1	3	2	1	1	4	...	1	1	2	87
Canada										10											10
Homeopathic, U. S. ....				2		3	2	2		1							2				11
Eclectic, U. S. ....	1			6	4			2													13
Physio-Medical, U. S. ....	1					1															2
Totals.....	4	2	2	17	26	12	8	12	1	24	1	3	2	1	1	4	2	1	1	2	126

NOTE.—The average duration of lecture terms is twenty-three and one-half (23½) weeks. There are one hundred and one (101) colleges with terms of five (5) months or over; and forty-two (42) colleges have terms of six (6) months or over.

## B.—ANALYSIS OF COLLEGES AND STUDENTS.

## 1. COLLEGES—EXISTING AND EXTINCT—IN EACH STATE, BY SCHOOLS OF PRACTICE.

States.	Status.	Regular	Homeo.	Electic	Ph-Med	Misc.	Fraud't.	Totals..
United States.....	Existing..	93	12	15	2	4	.....	126
	Extinct...	46	7	9	2	12	14	90
Totals .....		139	19	24	4	16	14	216
Canada.....	Existing..	12	.....	.....	.....	.....	.....	12
	Extinct..	3	.....	.....	.....	.....	.....	3
Totals .....		15	.....	.....	.....	.....	.....	15
Totals both countries.....	Existing..	105	12	15	2	4	.....	138
	Extinct...	49	7	9	2	12	14	93
Totals .....		154	19	24	4	16	14	231
Alabama.....	Existing..	1	.....	.....	.....	.....	.....	1
	Extinct..	1	.....	.....	.....	.....	.....	1
Totals .....		2	.....	.....	.....	.....	.....	2
Arkansas .....	Existing..	1	.....	.....	.....	.....	.....	1
	Extinct...	.....	.....	.....	.....	.....	.....	.....
Totals .....		1	.....	.....	.....	.....	.....	1
California.....	Existing..	2	.....	1	.....	.....	.....	3
	Extinct...	.....	.....	.....	.....	.....	.....	.....
Totals .....		2	.....	1	.....	.....	.....	3
Colorado.....	Existing..	2	.....	.....	.....	.....	.....	2
	Extinct...	.....	.....	.....	.....	.....	.....	.....
Totals .....		2	.....	.....	.....	.....	.....	2
Connecticut.....	Existing..	1	.....	.....	.....	.....	.....	1
	Extinct...	.....	.....	.....	.....	.....	.....	.....
Totals .....		1	.....	.....	.....	.....	.....	1
District of Columbia .....	Existing..	3	.....	.....	.....	.....	.....	3
	Extinct...	.....	.....	.....	.....	.....	.....	.....
Totals .....		3	.....	.....	.....	.....	.....	3
Florida .....	Existing..	.....	.....	.....	.....	1	.....	1
	Extinct...	.....	.....	.....	.....	.....	.....	.....
Totals .....		.....	.....	.....	.....	1	.....	1
Georgia.....	Existing..	3	.....	2	.....	.....	.....	5
	Extinct...	2	.....	1	.....	2	.....	5
Totals .....		5	.....	3	.....	2	.....	10
Illinois.....	Existing..	5	2	1	.....	.....	.....	3
	Extinct...	3	.....	.....	.....	.....	11	4
Totals .....		8	2	1	.....	.....	11	12

## Analysis of Colleges and Students—Continued.

States.	Status.	Regular.	Homeo.	Eclectic.	Ph-Med.	Misc....	Fraudt.	Totals...
Indiana .....	Existing..	5	.....	2	1	.....	.....	8
	Extinct...	2	.....	.....	.....	.....	1	3
Totals .....		7	.....	2	1	.....	1	11
Iowa .....	Existing..	3	1	2	.....	.....	.....	6
	Extinct...	1	.....	.....	.....	.....	.....	1
Totals .....		4	1	2	.....	.....	.....	7
Kansas.....	Existing..	1	.....	.....	.....	.....	.....	1
	Extinct...	.....	.....	.....	.....	.....	.....	.....
Totals .....		1	.....	.....	.....	.....	.....	1
Kentucky .....	Existing..	4	.....	.....	.....	.....	.....	4
	Extinct...	2	.....	.....	.....	.....	.....	2
Totals .....		6	.....	.....	.....	.....	.....	6
Louisiana .....	Existing..	1	.....	.....	.....	.....	.....	1
	Extinct...	4	.....	.....	.....	.....	.....	4
Totals .....		5	.....	.....	.....	.....	.....	5
Maine .....	Existing..	2	.....	1	.....	1	.....	4
	Extinct...	.....	.....	.....	.....	.....	.....	.....
Totals .....		2	.....	1	.....	1	.....	4
Maryland .....	Existing..	5	.....	.....	.....	.....	.....	5
	Extinct...	1	.....	.....	.....	.....	.....	1
Totals .....		6	.....	.....	.....	.....	.....	6
Massachusetts .....	Existing..	2	1	.....	.....	.....	.....	3
	Extinct...	2	1	.....	.....	.....	5	8
Totals .....		4	2	.....	.....	.....	5	11
Michigan .....	Existing..	3	1	.....	.....	.....	.....	4
	Extinct...	.....	1	.....	.....	.....	.....	1
Totals .....		3	2	.....	.....	.....	.....	5
Minnesota .....	Existing..	2	.....	.....	.....	.....	.....	2
	Extinct...	1	.....	.....	.....	.....	.....	1
Totals .....		3	.....	.....	.....	.....	.....	3
Missouri .....	Existing..	9	2	2	.....	.....	.....	13
	Extinct...	3	3	.....	.....	1	1	8
Totals .....		12	5	2	.....	1	1	21
Nebraska .....	Existing..	2	.....	.....	.....	.....	.....	2
	Extinct...	.....	.....	.....	.....	.....	.....	.....
Totals .....		2	.....	.....	.....	.....	.....	2

*Analysis of Colleges and Students—Continued.*

States.	Status.	Regular.	Homeo.	Eclectic.	Ph-Med.	Misc.....	Fraudt..	Totals...
New Hampshire .....	Existing..	1	.....	.....	.....	.....	.....	1
	Extinct ..	.....	.....	.....	.....	.....	1	1
Totals .....	.....	1	.....	.....	.....	.....	1	2
New Jersey .....	Existing..	1	.....	.....	.....	.....	.....	1
	Extinct ..	.....	.....	.....	.....	2	.....	2
Totals .....	.....	1	.....	.....	.....	2	.....	3
New York .....	Existing..	9	2	2	.....	1	.....	14
	Extinct ..	9	.....	3	.....	2	3	16
Totals .....	.....	18	2	4	.....	3	3	30
North Carolina .....	Existing..	2	.....	.....	.....	.....	.....	2
	Extinct ..	.....	.....	.....	.....	.....	1	1
Totals .....	.....	2	.....	.....	.....	.....	1	3
Ohio .....	Existing..	9	2	2	1	1	.....	15
	Extinct ..	3	1	3	1	.....	1	10
Totals .....	.....	12	3	5	3	1	1	25
Oregon .....	Existing..	1	.....	.....	.....	.....	.....	1
	Extinct ..	.....	.....	.....	.....	.....	.....	.....
Totals .....	.....	1	.....	.....	.....	.....	.....	1
Pennsylvania .....	Existing..	4	1	.....	.....	.....	.....	5
	Extinct ..	4	1	3	.....	1	.....	9
Totals .....	.....	8	2	3	.....	1	.....	14
Rhode Island .....	Existing..	.....	.....	.....	.....	.....	.....	.....
	Extinct ..	1	.....	.....	.....	.....	.....	1
Totals .....	.....	1	.....	.....	.....	.....	.....	1
South Carolina .....	Existing..	1	.....	.....	.....	.....	.....	1
	Extinct ..	2	.....	.....	.....	.....	.....	2
Totals .....	.....	3	.....	.....	.....	.....	.....	3
Tennessee .....	Existing..	4	.....	.....	.....	.....	.....	4
	Extinct ..	1	.....	.....	.....	1	.....	2
Totals .....	.....	5	.....	.....	.....	1	.....	6
Texas .....	Existing..	.....	.....	.....	.....	.....	.....	.....
	Extinct ..	1	.....	.....	.....	.....	.....	1
Totals .....	.....	1	.....	.....	.....	.....	.....	1
Utah Territory .....	Existing..	.....	.....	.....	.....	.....	.....	.....
	Extinct ..	.....	.....	.....	.....	1	.....	1
Totals .....	.....	.....	.....	.....	.....	1	.....	1



*Analysis of Colleges and Students—Continued.*

States.	Status.	Regular.	Homeo.	Eclectic.	Ph-Med.	Miscel.	Pract.	Totals.
Vermont .....	Existing ..	1						1
	Extinct ..	2						2
Totals .....		3						3
Virginia .....	Existing ..	2						2
	Extinct ..	1						1
Totals .....		3						3
Wisconsin .....	Existing ..							
	Extinct ..					1		1
Totals .....						1		1

## Analysis of Colleges and Students—Continued.

II.—MATRICULATES AND GRADUATES IN EACH STATE—1877-78 TO 1882-83, INCLUSIVE.

States.	Schools.	Classes.	Sessions.						Totals .....	Per cent.
			1877-8.	1878-9.	1879-80	1880-1.	1881-2.	1882-3.		
Alabama.....	Regular.	Matr's .. Grad's..	18	18	20	22	21	47 16	47 115	34+*
Arkansas .....	Regular.	Matr's .. Grad's..	.....	.....	22 1	32 10	36 5	32 4	122 20	16.4
California .....	Regular.	Matr's .. Grad's..	65 37	58 28	42 18	120 25	126 27	146 .....	557 135	24.3
	Eclectic.	Matr's .. Grad's..	.....	.....	48 13	31 11	25 10	32 11	136 45	33+
Canada .....	Regular.	Matr's .. Grad's..	351 64	434 107	423 96	535 103	662 105	856 164	3,231 639	19.8
Colorado ... ..	Regular.	Matr's .. Grad's..	.....	.....	.....	.....	15 5	21 5	36 10	27.7
Connecticut .....	Regular.	Matr's .. Grad's..	58 10	60 16	32 12	26 10	21 2	32 7	229 57	24.9
Dist. of Columbia...	Regular.	Matr's .. Grad's..	119 19	123 27	141 34	168 23	173 31	193 45	917 179	19.5
Georgia.....	Regular.	Matr's .. Grad's..	88 23	125 34	165 51	198 69	261 116	230 76	1,067 369	32.4*
	Eclectic.	Matr's .. Grad's..	.....	.....	.....	.....	81 24	67 18	148 42	28.3
Illinois.....	Regular.	Matr's .. Grad's..	564 185	555 164	705 195	788 234	821 247	923 295	4,356 1,320	30.3
	Homeo.	Matr's .. Grad's..	272 119	307 98	291 107	282 125	392 146	422 174	1,966 769	39.1
	Eclectic.	Matr's .. Grad's..	139 65	106 29	123 37	127 51	113 38	147 52	755 272	36+
Indiana .....	Regular.	Matr's .. Grad's..	37 21	179 80	249 77	286 106	251 95	227 101	1,229 480	39+
	Ph-Med.	Matr's .. Grad's..	19 8	15 7	15 8	20 10	24 10	26 11	119 54	45.3
	Eclectic.	Matr's .. Grad's..	.....	.....	.....	27 12	19 11	24 7	70 30	42.8

\*Returns imperfect; percentages computed only for the years in which complete returns have been received.

## Analysis of Colleges and Students—Continued.

States.	Schools.	Classes.	Sessions.						Totals . . . . .	Percent.
			1877-8	1878-9	1879-80	1880-1	1881-2	1882-3		
Iowa . . . . .	Regular.	Matr's .. Grad's..	82 19	92 15	126 22	415 152	424 172	292 89	1,431 469	32.7*
	Homeo..	Matr's .. Grad's..	18 1	32 3	47 9	60 16	46 15	44 12	247 56	22.6
	Eclectic.	Matr's .. Grad's..	.....	.....	.....	.....	25 7	38 8	63 15	23.8
Kentucky . . . . .	Regular.	Matr's .. Grad's..	413 158	433 169	604 232	513 228	513 241	596 201	3,072 1,229	40.0
Louisiana . . . . .	Regular.	Matr's .. Grad's..	.....	.....	.....	204 41	220 56	212 73	636 170	26.7
Maine . . . . .	Regular.	Matr's .. Grad's..	94 25	99 31	105 22	115 30	104 28	94 28	611 164	26.8
	Eclectic.	Matr's .. Grad's..	.....	.....	.....	.....	23 3	38 14	61 17	27.8
Maryland . . . . .	Regular.	Matr's ..	165 65	211 80	336 110	328 143	392 175	392 129	1,824 792	38.4
Massachusetts . . . . .	Regular.	Matr's .. Grad's..	*73 47	229 70	*96 45	234 10	283 88	253 84	1,168 394	30.2*
	Homeo..	Matr's .. Grad's..	169 43	149 35	127 33	110 26	110 29	109 30	774 198	25.5
Michigan . . . . .	Regular.	Matr's .. Grad's..	296 98	329 104	468 118	380 127	500 121	479 158	2,452 726	28.4
	Homeo..	Matr's .. Grad's..	73 22	63 25	70 18	88 23	71 15	57 17	422 120	28.4
Minnesota . . . . .	Regular.	Matr's .. Grad's..	.....	.....	.....	.....	25 5	58 4	89 9	10.8
	Regular.	Matr's .. Grad's..	473 161	462 159	569 192	604 226	628 250	598 230	3,334 1,218	36.5
Missouri . . . . .	Homeo..	Matr's .. Grad's..	.....	.....	.....	.....	.....	41 11	41 11	26.8
	Eclectic.	Matr's .. Grad's..	120 78	66 36	95 42	66 22	118 40	114 38	579 256	44.2*
Nebraska . . . . .	Regular.	Matr's .. Grad's..	.....	.....	.....	.....	33 8	30 9	63 17	27.0

\*Returns imperfect; percentages computed only for the years in which complete returns have been received.

## Analysis of Colleges and Students—Continued.

States.	Schools.	Classes.	Sessions.						Totals.....	Percent.
			1877-8.	1878-9.	1879-80.	1880-1.	1881-2.	1882-3.		
New Hampshire ....	Regular.	Matr's .. Grad's..	87 30	88 23	80 26	78 29	91 43	76 28	500 179	35.8
New York.....	Regular.	Matr's .. Grad's..	1,732 539	1,933 601	2,142 629	2,209 642	2,197 792	2,146 646	12,359 3,849	31.1
	Homeo..	Matr's .. Grad's..	152 38	152 40	157 40	199 59	187 46	187 55	1,034 278	26.8
	Eclectic.	Matr's .. Grad's..	107 26	138 24	172 32	249 64	270 86	224 62	1,160 294	25.3
North Carolina ....	Regular.	Matr's ..	.....	.....	.....	.....	11	11	.....	.....
Ohio.....	Regular.	Matr's .. Grad's..	779 285	401 166	910 310	566 197	933 390	924 319	4,513 1,667	36.9
	Homeo..	Matr's .. Grad's..	106 74	108 54	130 47	219 67	208 60	197 86	968 388	30.2*
	Eclectic.	Matr's .. Grad's..	267 121	209 74	243 50	316 114	272 100	225 64	1,532 523	34.1
	Ph-Med.	Matr's .. Grad's..	37 14	33 7	35 12	34 11	36 12	26 12	201 68	33.8
Oregon .....	Regular.	Matr's .. Grad's..	25 7	32 8	27 6	31 13	29 9	28 10	172 53	30.8
Pennsylvania .....	Regular.	Matr's .. Grad's..	1,103 347	1,059 307	1,095 325	1,153 340	1,135 391	1,088 376	6,633 2,086	31.4
	Homeo..	Matr's .. Grad's..	161 52	162 61	192 75	208 83	148 57	147 52	1,018 380	37.3
South Carolina.....	Regular.	Matr's .. Grad's..	60 17	71 20	74 23	77 21	56 19	61 18	399 118	29.5
Tennessee.....	Regular.	Matr's .. Grad's..	134 3	140 8	448 201	158 67	589 298	504 211	2,013 778	43.2
Vermont.....	Regular.	Matr's .. Grad's..	108 33	140 49	143 53	171 50	190 85	151 36	963 306	33.8
Virginia.....	Regular.	Matr's .. Grad's..	..... 17	..... 21	..... 12	57 13	34 25	117 25	208 113	24.0*

\*Returns imperfect; percentages computed only for the years in which complete returns have been received.



*Analysis of Colleges and Students—Continued.*

## III. MATRICULATES AND GRADUATES IN EACH STATE, SESSION OF 1882-83.

States.	Students.	Regular.	Home.	Ecclectic.	Ph-Med.	Totals.
United States.....	Matriculates... Graduates..... Percent.....	10,235 3,496 33.2	1,204 437 36.2	872 288 33.0	52 23 44.2	12,363 4,244 34.3
Canada.....	Matriculates... Graduates..... Percent.....	856 164 19.1	..... ..... .....	..... ..... .....	..... ..... .....	856 164 19.1
Total both countries.....	Matriculates... Graduates..... Percent.....	11,091 3,660 32.8	1,204 437 36.2	872 288 33.0	52 23 44.2	13,291 4,408 33.3
Alabama.....	Matriculates... Graduates..... Percent.....	47 16 34+	..... ..... .....	..... ..... .....	..... ..... .....	47 16 34+
Arkansas.....	Matriculates... Graduates..... Percent.....	32 4 12.5	..... ..... .....	..... ..... .....	..... ..... .....	32 4 12.5
California.....	Matriculates... Graduates..... Percent.....	146 30 20.5	..... ..... .....	32 11 34.3	..... ..... .....	178 41 23+
Colorado.....	Matriculates... Graduates..... Percent.....	21 5 23.8	..... ..... .....	..... ..... .....	..... ..... .....	21 5 23.8
Connecticut.....	Matriculates... Graduates..... Percent.....	32 7 21.8	..... ..... .....	..... ..... .....	..... ..... .....	32 7 21.8
District of Columbia.....	Matriculates... Graduates..... Percent.....	193 45 23.3	..... ..... .....	..... ..... .....	..... ..... .....	193 45 23.3
Georgia.....	Matriculates... Graduates..... Percent.....	230 76 33+	..... ..... .....	67 18 27—	..... ..... .....	297 94 31.6
Illinois.....	Matriculates... Graduates..... Percent.....	923 295 31.9	422 174 41.2	147 52 35.3	..... ..... .....	1,492 521 34.8
Indiana.....	Matriculates... Graduates..... Percent.....	227 101 44.4	..... ..... .....	24 7 29.1	26 11 42.3	277 119 32.8
Iowa.....	Matriculates... Graduates..... Percent.....	292 89 30.4	44 12 27.2	38 8 42.1	..... ..... .....	334 109 32.6

*Analysis of Colleges and Students—Continued.*

States.	Students	Regular...	Homeo...	Eclectic...	Ph.-Med...	Totals...
Kentucky .....	Matriculantes ... Graduates ... Percent .....	672 231 34.3	..... ..... .....	..... ..... .....	..... ..... .....	672 231 34.3
Louisiana .....	Matriculantes ... Graduates ... Percent .....	212 73 34.4	..... ..... .....	..... ..... .....	..... ..... .....	212 73 34.4
Maine .....	Matriculantes ... Graduates ... Percent .....	94 28 29.7	..... ..... .....	38 14 36.8	..... ..... .....	132 42 31.9
Maryland .....	Matriculantes ... Graduates ... Percent .....	392 129 32.8	..... ..... .....	..... ..... .....	..... ..... .....	392 129 32.8
Massachusetts .....	Matriculantes ... Graduates ... Percent .....	263 84 31.9	109 30 27.5	..... ..... .....	..... ..... .....	372 114 30.6
Michigan .....	Matriculantes ... Graduates ... Percent .....	479 158 32.9	57 17 29.8	..... ..... .....	..... ..... .....	536 175 31.5
Missouri .....	Matriculantes ... Graduates ... Percent .....	598 230 38.4	41 11 26.8	114 38 33.3	..... ..... .....	753 279 37+
Nebraska .....	Matriculantes ... Graduates ... Percent .....	30 9 30.0	..... ..... .....	..... ..... .....	..... ..... .....	30 9 30.0
New Hampshire .....	Matriculantes ... Graduates ... Percent .....	76 28 36.8	..... ..... .....	..... ..... .....	..... ..... .....	76 28 36.8
New York .....	Matriculantes ... Graduates ... Percent .....	2,146 646 30.1	187 55 29.4	224 62 27.7	..... ..... .....	2,557 763 29.8
North Carolina .....	Matriculantes ... Graduates ... Percent .....	11 ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	11 ..... .....
Ohio .....	Matriculantes ... Graduates ... Percent .....	924 319 34.5	197 86 43.5	225 64 28.4	36 12 33.3	1,372 481 35+
Oregon .....	Matriculantes ... Graduates ... Percent .....	28 10 35.7	..... ..... .....	..... ..... .....	..... ..... .....	28 10 35.7
Pennsylvania .....	Matriculantes ... Graduates ... Percent .....	1,088 376 34.5	147 52 35.3	..... ..... .....	..... ..... .....	1,235 428 34.6

*Analysis of Colleges and Students—Continued.*

States.	Students.	Regular.	Homeo.	Ecclectic.	Ph-Med.	Totals....
South Carolina.....	Matriculantes ..	61	.....	.....	.....	71
	Graduates.....	18	.....	.....	.....	18
	Percent.....	29.5	.....	.....	.....	29.5
Tennessee .....	Matriculantes ..	504	.....	.....	.....	504
	Graduates.....	211	.....	.....	.....	211
	Percent.....	41.8	.....	.....	.....	41.8
Vermont.....	Matriculantes ..	151	.....	.....	.....	151
	Graduates.....	36	.....	.....	.....	36
	Percent.....	23.8	.....	.....	.....	23.8
Virginia .....	Matriculantes ..	117	.....	.....	.....	117
	Graduates.....	25	.....	.....	.....	25
	Percent.....	21.3	.....	.....	.....	21.3

## Geographical Distribution of Physicians and Students.

### A.—DISTRIBUTION OF PHYSICIANS AND STUDENTS, BY STATES, AND THEIR PROPORTION TO POPULATION.

STATES.	Popula- tion.*	PHYSICIANS.		STUDENTS.					
		Total number	Prop. to pop.	Total number.	Prop. to pop.	Regular.....	Homeopathic..	Eclectic.....	Ph.-Med.....
			One to—		One to—				
Alabama.....	1,262,505	1,552	813	178	7,081	170	1	7	....
Arizona.....	40,440	71	570	3	13,480	1	1	1	....
Arkansas.....	802,525	1,892	424	125	6,420	118	2	5	....
California.....	864,694	1,851	467	196	4,411	160	7	29	....
Canada.....	4,099,807	3,487	1,112	1,022	4,010	997	16	9	....
Colorado.....	191,327	570	341	50	5,826	44	4	2	....
Connecticut.....	537,554	952	575	160	3,359	121	26	13	....
Dakota.....	135,177	212	642	23	5,877	15	4	4	....
Delaware.....	146,608	217	675	28	5,236	22	6	....	....
District of Columbia.....	177,624	423	419	103	1,724	103	....	....	....
Florida.....	269,493	374	720	21	12,833	15	....	6	....
Georgia.....	1,542,180	1,995	770	350	4,406	279	1	71	....
Idaho.....	32,610	51	640	2	16,305	2	....	....	....
Illinois.....	3,331,644	5,716	582	840	3,847	593	160	76	7
Indiana.....	1,978,301	4,993	396	587	3,353	469	28	74	22
Iowa.....	1,624,615	3,035	535	459	3,539	369	73	16	1
Kansas.....	996,096	1,964	507	138	7,218	103	16	19	....
Kentucky.....	1,648,690	2,985	551	442	3,730	423	12	7	2
Louisiana.....	939,946	1,033	909	176	5,340	169	1	6	....
Maine.....	648,936	969	670	187	3,416	140	23	24	....
Maryland.....	934,943	2,845	329	191	4,894	174	14	3	....
Massachusetts.....	1,783,085	2,845	623	459	3,884	376	72	11	....

\*Figures of population and numbers of physicians are those given in the United States census of 1880, where not otherwise specified in the text--which see.



## Geographical Distribution—Continued.

STATES.	Popula- tion.*	PHYSICIANS.		STUDENTS.					
		*Total no.....	Prop. to pop.	*Total no.....	Prop. to pop.	Regular.....	Homeopathic.	Eclectic .....	Ph. Med .....
			One to--		One to--				
Michigan .....	1,639,937	2,924	560	414	3,953	320	67	27	...
Minnesota .....	750,473	914	854	148	5,070	110	22	16	...
Mississippi .....	1,131,597	1,682	673	128	8,840	122	1	5	...
Missouri .....	2,168,380	4,550	476	531	4,064	505	34	42	1
Montana .....	39,159	77	508	5	7,831	2	...	3	...
Nebraska .....	452,402	878	521	72	6,283	64	9	9	...
Nevada .....	62,266	134	464	2	31,133	1	...	1	...
New Hampshire .....	346,991	610	567	105	3,304	85	8	7	...
New Jersey .....	1,131,116	1,595	709	249	4,542	205	32	12	...
New Mexico .....	119,565	80	1,494	13	9,166	4	10	...	...
New York .....	5,082,871	9,272	548	1,575	3,220	1,258	186	131	...
North Carolina .....	1,399,750	1,360	1,029	181	7,733	174	...	2	...
Ohio .....	3,198,062	6,393	502	897	3,565	753	111	43	18
Oregon .....	174,678	495	353	55	3,177	50	3	1	...
Pennsylvania .....	4,282,891	7,042	698	1,085	3,947	944	125	16	1
Rhode Island .....	276,531	396	698	61	4,533	52	7	2	...
South Carolina .....	995,577	919	1,084	127	7,839	122	...	4	1
Tennessee .....	1,542,359	2,688	574	292	5,292	282	2	8	...
Texas .....	1,592,574	3,003	530	269	5,920	252	4	12	1
Utah .....	143,963	139	1,035	11	13,087	11	...	...	...
Vermont .....	332,286	659	904	107	3,105	87	12	8	...
Virginia .....	1,512,565	1,898	706	229	6,164	224	4	2	...
Washington Territory .....	75,120	152	494	13	5,778	8	4	1	...
West Virginia .....	618,457	939	658	138	4,409	130	2	4	2
Wisconsin .....	1,315,947	1,549	849	276	4,766	196	64	16	...
Wyoming .....	20,789	30	693	1	20,789	...	...	1	...
Totals—U. S. only .....	50,291,939	86,923	...	111,791	...	9,831	1,173	756	56
Average proportions .....	...	...	578	...	4,265	...	...	...	...

\* Figures of population and numbers of physicians are those given in the United States census of 1880, where not otherwise specified in the text--which see.

† This does not include 155 regular, 10 homeopathic, and 4 eclectic students, from foreign countries--who swell the total of students in attendance, of whom the places of residence are given in the college announcements, session of 1882-83, to 11,995.





## B.—Distribution of Students by Colleges and States.—Continued.

	STUDENTS IN ATTENDANCE FROM EACH STATE.														
	Alabama.....	Arizona.....	Arkansas.....	California.....	Canada.....	Colorado.....	Connecticut. . .	Dakota.....	Delaware.....	Dist. Columbia	Florida.....	Georgia.....	Idaho.....	Illinois.....	Indiana.....
N. H.—Med. Dept., Dartmouth Coll. ....					20		2							1	1
N. Y.—Coll. of Phys. and Surg's, City of New York.			1	2	8		34			2				8	8
Albany Med. Coll. ....					1		1								
Med. Dept., Univ., City of New York.....				1	20	1	26			1		3		1	3
Med. Dept., Univ. of Buffalo.....	4			1	11	1	1								
Long Island Coll. Hosp. ....					1		3					1		3	
Bellevue Hosp. Med. Coll. ....			6	4	10	2	7				1	9	1	12	15
Woman's Med. Coll., New York Infirmary	2						3								17
Coll. of Med., Syracuse Univ. ....															
N. C.—Med. Dept., Shaw Univ. ....												2			
O.—			4		1		1	2				4			
Med. Coll. of Ohio.....					1										49
Med. Dept., Western Reserve Univ. ....					1				1					3	3
Starling Med. Coll. ....														1	1
Cin'ti Coll. of Med. and Surg'y .....			1									3		5	16
Miami Med. Coll. ....				1		1								7	16
Med. Dept., Univ. of Wooster.....	4				1									2	1
Columbus Med. Coll. ....					1										
Toledo Med. Coll. ....					1										
Or.—															
Med. Dept., Willamette Univ. ....															
PA.—			1		5		24		17			2			
Dept. of Med., Univ. of Pa. ....	2														2
Jefferson Med. Coll. ....	5		1		5		3			15	1	5		14	7
Woman's Med. Coll. of Pa. ....				2						3				2	
Medico-Chir. Coll. of Phila. ....															1
S. C.—Med. Coll., State of S. C. ....	2			1											

COLLEGES—Regular.





## B.—Distribution of Students by Colleges and States.—Continued.

COLLEGES—Regular.	STUDENTS IN ATTENDANCE FROM EACH STATE.																
	Kansas	Kentucky.....	Louisiana .....	Maine .....	Maryland.....	Massachusetts	Michigan.....	Minnesota.....	Mississippi....	Missouri .....	Montana.....	Nebraska.....	Nevada .....	New Hamp'sre	New Jersey...	New Mexico...	New York .....
ALA.—Med. Coll. of Ala. ....				6				3									
ARK.—Med. Dept., Ind'l Univ. ....																	
CAL.—Cooper Med. Coll. ....	1									1			1				
Univ. of Cal. Med. Coll. ....																	
CAN.—Halifax Med. Coll. ....																	
Toronto School of Med. ....						1											
Trinity Med. School.....																	1
Royal Coll. of Phys. and Surg's...																	3
Med. Dept., Western Univ. ....						2		4									
Med. Dept., McGill Univ. ....																	
Ecole de Med. et Chir. ....																	
Med. Dept., Laval Univ. ....						1											
Bishop's Coll. Univ., Faculty of Med.						1											
COL.—Med. Dept., Univ. of Denver.			1														2
CONN.—Med. Dept. of Yale Coll. ....				2													3
D. C.—National Med. Coll. ....		1	1	4	5	2		1						4			6
Med. Dept., Univ. of Georgetown.					2												3
Med. Dept., Howard Univ. ....	1			1	6		2		1	1					3		9
GA.—Med. Coll. of Ga. ....			1														
Atlanta Med. Coll. ....			1														1
Southern Med. Coll. ....			2							3							









## B.—Distribution of Students by Colleges and States—Continued.

COLLEGES—Regular.	STUDENTS IN ATTENDANCE FROM EACH STATE.														Totals.....	
	North Carolina	Ohio	Oregon	Pennsylvania..	Rhode Island..	South Carolina	Tennessee	Texas.....	Utah	Vermont.....	Virginia	Wash'ton Ter..	West Virginia.	Wisconsin....		Foreign.....
ALA.—Med. Coll. of Ala. ....	1							2								47
ARK.—Med. Dept., Ind'l Univ. ....							1	2								32
CAL.—Cooper Med. Coll. Univ. of Cal. Med. Coll. <sub>2</sub> .....	1	1	2						1	1		2			1	84
CAN.—Halifax Med. Coll. Toronto School of Medicine. Trinity Med. School. Royal Coll. of Phys. and Surg's. Med. Dept., Western Univ. Med. Dept., McGill Univ. Ecole de Med. et Chir. Med. Dept., Laval Univ. Bishop's Coll. Univ., Faculty of Med.																59
																40
																87
																205
																18
																15
															2	184
																125
																117
														1		34
COL.—Med. Dept., Univ. of Denver																21
CONN.—Med. Dept. of Yale College															3	32
D. C.—National Med. Coll. Med. Dept., Univ. of Georgetown. Med. Dept., Howard Univ.		3		3		1	1			1	4			1	3	75
		1		1							2				2	27
	2	5		3		1				3	5		3			88
GA.—Med. Coll. of Ga. Atlanta Med. Coll. Southern Medical Coll.						1		1								47
	3					5	1	5		1						126
	5					6	7	2			4					194



## B.—Distribution of Students by Colleges and States.—Continued.

COLLEGES—Regular.	STUDENTS IN ATTENDANCE FROM EACH STATE.															Totals
	North Carolina	Ohio	Oregon	Pennsylvania	Rhode Island	South Carolina	Tennessee	Texas	Utah	Vermont	Virginia	Washing'n Ter.	West Virginia	Wisconsin	Foreign	
N. H.—Med. Dept., Dartmouth Coll.		1				1				10						93
N. Y.—Coll. of Phys. and Surg's, City of New York.		4				2	2	1		11	2		2	3	17	536
Albany Med. Coll.				3	6											157
Med. Dept., Univ., City of New York.	5			1	1	1								3	33	528
Med. Dept., Univ. of Buffalo.		2	1	45	5				1	10	12			1	1	183
Long Island Coll. Hosp.	2			14	2										6	151
Bellevue Hosp. Med. Coll.	9	39	5	7				2					6	3	15	469
Woman's Med. Coll., New York Infirmary.				35		5	12	13		7	9			1	4	40
Coll. of Med., Syracuse Univ.				1												46
N. C.—Med. Dept., Shaw Univ.	2					1	1				1		1			11
O.—Med. Coll. of Ohio		156	1	2				3	1				7		2	287
Med. Dept., Western Reserve Univ.		105		45						1			2		1	161
Starling Med. Coll.		44		2									4			54
Cin'tl Coll. of Med. and Surg'y.		36	1	6		1		3	1		1					89
Miami Med. Coll.		67		10									2			118
Med. Dept., Univ. of Wooster		42		10												57
Columbus Med. Coll.		103		6					1		1					124
Toledo Med. Coll.		17		2												19
Or.—Med. Dept., Willamette Univ.			25									3				28
PA.—Dept. of Med., Univ. of Pa.	2	8		214	1		1	1			7		2		18	363
Jefferson Med. Coll.	10	20	5	318	2	3	4		1		6	2	10	3	17	560
Woman's Med. Coll. of Pa.	1	13	1	59	4			9	2	1	1		2		4	133
Medico-Chir. Coll. of Phila.		1		30	17										3	57
S. C.—Med. Coll., State of S. C.	3					54			1							61

COLLEGES—Regular.





## B.—Distribution of Students by Colleges and States—Continued.

COLLEGES— <i>Homeopathic.</i>		STUDENTS IN ATTENDANCE FROM EACH STATE.																								
		Alabama.....	Arizona.....	Arkansas.....	California.....	Canada.....	Colorado.....	Connecticut.....	Dakota.....	Delaware.....	Florida.....	Georgia.....	Illinois.....	Indiana.....	Iowa.....	Kansas.....	Kentucky.....	Louisiana.....	Maine.....	Maryland.....	Massachusetts.....	Michigan.....	Minnesota.....	Mississippi.....	Missouri.....	
CAN.—	Woman's Med. Coll.																									
ILL.—	Hahnemann Med. Coll. and Hosp. Chicago Hom. Med. Coll.				1	2	1		3			86	14	25	10	2			3		4	28	13		7	
IA.—	Hom. Med. Dept., State Univ.	1				3	1		1			64	7	7						2		6	4		2	
MASS.—	Boston Univ. School of Med.				1	1		8					1	32			1	10			6					
MICH.—	Hom. Med. Coll., Univ. of Mich.				1	3						3	2	5		6		2				26			1	
MO.—	Hom. Med. Coll. of Mo.											2		2									2	1	21	
N. Y.—	New York Hom. Med. Coll. New York Hom. Med. Coll. and Hosp. for Women					1	1	17			1	1					1				7	1				
O.—	Homeo. Hosp. Coll. Pulte Med. Coll.					4	1						1	4	2		5		2			4			2	
PA.—	Hahnemann Med. Coll.				2	2				6		3							5		6					
Total no. students from each State, 1882-83.....		1	1	2	7	16	4	26	4	6	1	100	28	73	16	12	1	23	11	72	67	22	1	34		

B.—*Distribution of Students by Colleges and States.—Continued.*

STUDENTS IN ATTENDANCE FROM EACH STATE.

		Totals.....
Foreign.....		4
Wyoming.....		
Wisconsin.....		40
West Virginia.....		1
Washington T.....		1
Virginia.....		1
Vermont.....		6
Texas.....		3
Tennessee.....		1
So. Carolina.....		1
Rhode Island.....		5
Pennsylvania.....		2
Oregon.....		1
Ohio.....		10
No. Carolina.....		3
New York.....		14
New Mexico.....		5
New Jersey.....		3
NewHamps're.....		4
Nevada.....		
Nebraska.....		5
Montana.....		1
CAN.—	Woman's Med. Coll.	
ILL.—	Hahnemann Med. Coll. and Hosp.	
	Chicago Hom. Med. Coll.	
IA.—	Hom. Med. Dept., State Univ.	
MASS.—	Boston Univ. School of Med.	
MICH.—	Hom. Med. Coll., Univ. of Mich.	
MO.—	Hom. Med. Coll. of Mo.	
N. Y.—	New York Hom. Med. Coll.	
	New York Med. Coll. and Hosp. for Women	
O.—	Homeo. Hosp. Coll.	
	Pulte Med. Coll.	
PA.—	Hahnemann Med. Coll.	
Total no. students from each State, 1882-83.		118

## B.—Distribution of Students by Colleges and States—Continued.

[illegible]



## B.—Distribution of Students by Colleges and States—Continued.

STUDENTS IN ATTENDANCE FROM EACH STATE.		Totals.....
COLLEGES— <i>Eclectic</i> .		
CAL.—California Med. Coll. ....	1	31
GA.—Coll. of Am. Med. and Surg'y ..		53
Georgia Ecl. Med. Coll. ....		67
ILL.—Bennett Coll. of Ecl. Med. and Surg'y ..	3	146
IND.—Indiana Ecl. Med. Coll. ....	6	29
IA.—Iowa Med. Coll. ....		21
ME.—Eclectic Med. Coll. of Maine ..	7	34
MO.—American Med. Coll. ....	3	70
N. Y.—Eclectic Med. Coll., City of New York ..	7	127
United States Med. Coll. ....	5	54
O.—Eclectic Med. Inst. ....	1	158
Total no. students from each State, 1882-83 .....	3	760
COLLEGES— <i>Physio-Medical</i> .		
IND.—Physio-Med. Coll. of Indiana .....		21
O.—Physio-Med. Inst. ....		35
Total no. students from each State, 1882-83 .....		56

## ERRATA.

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Arkansas, p. 11—Medical Department, Arkansas Industrial University, graduates, session of 1882-83, read 4, instead of 32.

Florida, p. 48—Medical Department of Florida University, organized in 1883, instead of 1853.

Illinois, p. 59—Chicago Medical College, percentage of graduates to matriculates, session of 1880-81, read 29.6, instead of 32.2.

Indiana, p. 67—Beach Medical College, add *Eclectic*.

Iowa, p. 70—Iowa Medical College read session, September, 1882, to *January*, 1883, instead of June, 1883.

Maryland, p. 81—School of Medicine of the University of Maryland, percentage of graduates to matriculates, session of 1879-80, read 38+, instead of 48+. P. 82—Woman's Medical College of Baltimore, number of graduates, session of 1882-83, *one*.

Minnesota, p. 91—Minnesota College Hospital, duration of lecture term, *twenty* weeks, instead of nineteen.

New York, p. 113—Albany Medical College, *three-year graded course required*. P. 117—New York Medical College and Hospital for Women, add *Homeopathic*. P. 119—United States Medical College, (Eclectic,) duration of lecture term, *twenty weeks*.

Ohio, p. 128—Cincinnati College of Medicine and Surgery, organized in 1849, instead of 1879.

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No information has been received concerning the Hospital Medical College at Evansville, Ind., organized in 1882. One graduate in Illinois.

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## SUPPLEMENTARY.

THROUGH the distribution of some 600 advance copies of the foregoing pages the following additional matter, corrections, etc., have been obtained. Delays in the public printing office make it practicable to insert them in this place. They follow the same general order as in the body of the section—that is, alphabetically by States, and chronologically as to the colleges.

COOPER MEDICAL COLLEGE (San Francisco,) had a class of 83 matriculates, and graduated 19 at the last session; percentage of graduates to matriculates, 22.9; average percentage for the last six years, 23.

UNIVERSITY OF CALIFORNIA MEDICAL COLLEGE (San Francisco) had a class of 63 matriculates, and graduated 11, at the last session; percentage of graduates to matriculates, 17.4; average percentage for the last three years, 23.

CANADA has no homeopathic school, but provision is made in some of the colleges for teaching homeopathy in accordance with the Medical Acts of the Dominion. The MANITOBA MEDICAL COLLEGE at Winnipeg was organized under the Manitoba Medical Act in 1883, but no announcement has yet been received.

MEDICAL DEPARTMENT OF THE UNIVERSITY OF GEORGETOWN (Washington, D. C.)—Faculty, as completed for the session of 1883-84, embraces seven professors, four clinical professors and two lecturers.

BENNETT MEDICAL COLLEGE (Chicago) has a chair of hygiene, although not so stated in the first announcements for the session of 1883-84. Duration of lecture term, six months.

EDINBURG UNIVERSITY OF CHICAGO, incorporated under the general incorporation act, September 23, 1870; a fraudulent institution; removed to St. Louis and exposed by the ILLINOIS STATE BOARD OF HEALTH, and since defunct.

CHICAGO HOMOPATHIC MEDICAL COLLEGE should read as follows: Organized in 1876. The first class graduated in 1877. Classes have been graduated each subsequent year.—The faculty embraces fifteen professors, two lecturers and three demonstrators.

*Course of Instruction:* A regular session of twenty-three weeks' duration, and a spring session of six weeks' duration, annually. Three years' graded course recommended, but not required. A junior and a senior course (two separate and distinct courses) are delivered during each college term. Clinics, hospital and dispensary. Lectures embrace: Junior year, anatomy, physiology, histology, microscopy, materia medica, chemistry, toxicology, pharmacology, minor surgery, odontology, sanitary science and clinics. Senior year, institutes and practice of medicine and surgery, gynecology, pedology, materia medica, obstetrics, ophthalmology and otology, mental and nervous diseases, medical jurisprudence and clinics.

*Requirements:* For admission: "This college requires that all applicants for admission must possess good moral character, and present to the secretary satisfactory evidence of a good English education, such as is required of all matriculates by the STATE BOARD OF HEALTH of Illinois. It is not intended to make this examination technical or rigid, but every student must possess a fair English education. Previous medical matriculates, graduates of colleges and high schools, will be exempt from this examination." For graduation: (1) twenty-one years of age; (2) three years' study; (3) two full courses; (4) practical anatomy to the extent of having dissected every region of the body; (5) pass all the regular examinations.

*Fees:* Matriculation, \$5; full lecture course, \$50; perpetual ticket, \$90; final examination, \$25. To students who have attended two full courses in other colleges, including matriculation, the full lecture course is \$30; to graduates of other medical colleges, \$25. For partial course, each chair, \$10; county hospital, lying-in hospital, and demonstrator's ticket, \$5 each.

*Students:* Number of matriculates and of graduates at each session reported, and percentages of graduates to matriculates—

Session.	Matriculates.	Graduates.	Per cent.
1877-78 .....	107	25	23.3
1878-79 .....	110	31	28.2
1879-80 .....	86	20	23.2
1880-81 .....	87	25	28.7
1881-82 .....	128	38	29.6
1882-83 .....	125	40	32

Average percentage of graduates to matriculates during the past six years, twenty-seven.

Number of Illinois students during the past year, 64.

Number of graduates in Illinois, 81.

*Remarks:* The course has been lengthened one week since the last announcement. Female students are no longer admitted. They are excluded, not from any hostility, but because of the peculiar conditions by which they are surrounded.

COLLEGE OF PHYSICIANS AND SURGEONS, Keokuk, Ia., has a chair of hygiene.

IOWA MEDICAL COLLEGE, Keokuk, Ia., organized in 1858; extinct since 1860.

KING ECLECTIC MEDICAL COLLEGE, Des Moines, Ia., organized in 1883. First class graduated in 1884. Faculty embraces nine professors, a demonstrator of anatomy, and two "professors of medical jurisprudence."

*Course of Instruction:* Two annual sessions were announced the first year, but subsequently this was changed to "one term a year of twenty weeks only." "The faculty offer a graded course of instruction of three years." Lectures embrace anatomy; "materia medica, therapeutics and diseases of women;" principles and practice of medicine, chemistry and toxicology; obstetrics, gynecology and diseases of children; nervous and mental diseases; ophthalmology and otology; physiology; dental surgery; medical jurisprudence; surgery.

*Requirements:* For admission, "No previous reading or study of medicine is required before entering college. Students will be admitted without reference to the school of medicine they have attended, or the preceptor with which they have studied."—*Extract from First Announcement*, page 9. For graduation: "Candidates must be twenty-one years old, and present testimonials of good moral character. Five years experience and one course of lectures, or two courses of lectures without experience. Must pass a satisfactory examination, either written or oral, at the discretion of the faculty."—*Ibid.*, page 11.

*Fees:* Matriculation fee, \$5; fees for the course, \$10; graduation fee, \$15.

*Students:* Number of matriculates, session of 1883-4, 30; of graduates, 9. Percentage of graduates to matriculates, thirty.

HOSPITAL MEDICAL COLLEGE, Evansville, Ind., announcement received,\* and the following is compiled therefrom:

Organized in 1882. First class graduated in the spring of 1883.—Faculty consists of nine professors and three lecturers.

*Course of Instruction* embraces a preliminary course of four weeks during September, free to matriculates of the college; and a regular winter course, beginning about the first of October and continuing five months.—Lectures are given on surgery, obstetrics, chemistry, anatomy, therapeutics, physiology, practical medicine, medical jurisprudence, ophthalmology and otology; together with daily clinics in medicine, surgery and obstetrics, "as the material will justify."

*Requirements:* There are no requirements announced for admission to the lecture course, but for graduation they are stated to be "three full years of study with a regular physician; two full courses of lectures, the last being at this college; the candidate must have reached his majority, and possess a good moral character; he must have dissected three parts of the human body and pass a satisfactory examination in each of the seven branches taught in this college."

*Fees:* Matriculation, \$5; lecture, \$40; practical anatomy, \$5; graduation, \$25.

*Students:* Session of 1882-3, matriculates, 11; graduates, 5. The secretary of the college writes: "One of the graduates had already graduated in another college. Our percentage [of graduates to matriculates], therefore, is forty. One graduate in Illinois."

COLLEGE OF PHYSICIANS AND SURGEONS, Boston, Mass., has a faculty of ten professors, seven lecturers, three instructors, one demonstrator and four clinical assistants.

NEW ENGLAND UNIVERSITY OF ARTS AND SCIENCES, Boston, Mass.; a fraudulent institution; now extinct.

MEDICAL DEPARTMENT OF THE UNIVERSITY OF MINNESOTA (Minneapolis), is organized by the Regents of the University under their charter, with power to confer degrees in medicine. The law regulating the practice of medicine in Minnesota makes this faculty the Board of Medical Examiners for the State. The work is entirely different from, and in no way connected with, their functions as the medical faculty of the University. As a faculty they examine, and recommend to the Regents, candidates for degrees in medicine. As an examining board, after "an examination of an elementary and practical character," they grant certificates entitling candidates to practice medicine in the State under the law to regulate the practice of medicine. A comparison of the "Regulations" on pages 21-2, with the Act on page 90, will explain in detail the difference referred to.

WOMAN'S MEDICAL COLLEGE OF ST. LOUIS (Homeopathic), organized in 1883. Faculty consists of nine professors.

*Course of Instruction:* One annual lecture term of twenty-two weeks' duration. Lectures embrace anatomy, descriptive and surgical; physiology and chemistry; pathology, theory and practice; materia medica; obstetrics; diseases of women; hygiene, diseases of children. Three years' course recommended but not required.

*Requirements:* For admission, candidates "must give evidence of good moral character, furnish credentials of suitable literary and scientific qualifications for entering upon a course of medical studies."—For graduation: (1) twenty-one years of age; (2) three years' study; (3) two courses of lectures; (4) evidence of having attended the clinics; (5) at least one creditable dissection of the usual division of the cadaver.

*Fees:* Matriculation (once only), \$5; professors' tickets, \$50; practical anatomy, \$10; graduation, \$25.

\* See ante, page 192, at foot of Errata.



NEW ENGLAND UNIVERSITY OF ARTS AND SCIENCES, Manchester, N. H.; a fraudulent institution, now extinct.

COLLEGE OF PHYSICIANS AND SURGEONS OF BUFFALO (not recognized, was also known by the titles, "Buffalo College of Rational Medicine," "Mohawk Medical College," and "Hamburg Canal College." These were one and the same institution, and not four separate ones, as might be inferred from pages 120-21.

MEDICAL COLLEGE OF OHIO and MIAMI MEDICAL COLLEGE (Cincinnati) have added to their requirements, as set forth on pages 125 and 128, respectively, the following: Conditions of Admission to Lecture Courses—1. Credible certificates of good moral standing. 2. Diplomas of graduation from a good literary and scientific college or high school. Or, lacking these, 3. A thorough examination in the branches of a good English education, including mathematics, English composition, and elementary physical or natural philosophy. Chairs of medical jurisprudence and hygiene have also been added to the respective faculties.

AMERICAN ECLECTIC MEDICAL COLLEGE, Cincinnati, O., organized in 1883, as the successor of the American Eclectic Medical College of 1879-82, which, in turn, was the successor of the Physio-Eclectic Medical College, organized in 1876, and neither of which institutions were recognized by the ILLINOIS STATE BOARD OF HEALTH.

The dean of the re-organization of 1883 writes, concerning the published announcement for the session of 1883-84, and the requirements of the ILLINOIS STATE BOARD OF HEALTH: "I think we now fully understand you, and have decided to come squarely up to the mark, i. e., to abandon intermediate positions; have but one graduating term per annum; exact preliminary school qualifications, and a full attainment of all basilar branches of medicine, with a curriculum embracing all usually required in a medical education," etc.

From the announcement for 1884-85 the following is compiled.—The faculty embraces ten professors.

*Course of Instruction:* One annual graduating session, beginning October 1, 1884, ending February 17, 1885.—Lectures embrace (each group by one professor) biology, psychology, functional pathology, and principles and practice of medicine; anatomy, general and operative surgery, organic pathology and practical anatomy (dissections); obstetrics, gynecology and diseases of children; physiology, histology and clinical medicine; ontology, bio-dynamics, and nervous diseases; mental and physical hygiene and sanitary science; medical jurisprudence; chemistry and toxicology; materia medica, general pathology and therapeutics; electro-therapeutics and orthopedic surgery.

*Requirements:* For admission, a certificate of college or high school graduation, or an examination in the usual English branches, and so much knowledge of Latin as is necessary to understand and use medical terms.—For graduation: Satisfactory evidence of good moral character; two full courses of lectures, the last in this college; certificate of three years' medical study and instruction under some physician in good standing; full and satisfactory examination in anatomy, physiology, materia medica and therapeutics, principles and practice of medicine, pathology, surgery, obstetrics and gynecology; fair examination in chemistry, forensic medicine and hygiene.

*Fees:* Matriculation (once only), \$5; lectures, \$60; hospital, demonstrator, dissecting material, \$5 each; graduation, \$25.

RHODE ISLAND has recently enacted the following:

An Act relating to Medical Examiners and Coroners.

*It is enacted by the General Assembly as follows:*

SECTION 1. The Governor shall appoint, in each county, able and discreet men, learned in the science of medicine, to be medical examiners in such county.

[Sec. 2 defines the number of such medical examiners in each district.]

Sec. 3. If either of the medical examiners shall, at any time, from any cause, be unable to perform the duties of his said office, or shall be deemed by the Attorney-General for any cause disqualified therefor, a medical examiner from an adjoining district may be called upon to perform them.

Sec. 4. Every medical examiner shall hold his office for a term of six years, and until another is appointed and qualified to act in his place, unless sooner removed by the appointment of some other person to fill his place.

Sec. 5. Every medical examiner shall, within thirty days after his appointment, and before entering upon the duties of his office, give bond with surety to, and to the satisfaction of, the General Treasurer in the sum of one thousand dollars, for the faithful performance of his duties.

Sec. 6. If the condition of any such bond be broken, to the injury of any person, actions may be brought upon such bond as upon the official bonds of sheriffs.

Sec. 7. Medical examiners shall make examinations as hereinafter provided, upon bodies of such persons only as are supposed to have come to their death by violence.

Sec. 8. When a medical examiner has notice that there has been found, or is lying within his district the body of a person who is supposed to have come to his death by violence, he shall forthwith repair to the place where such body lies, and take charge of the same; and if, on view thereof and personal inquiry into the cause and manner of the death, he shall, upon being thereto authorized, in writing, by the Attorney-General, or by the mayor of the city or president of the town council of the town where such body lies, make an autopsy in the presence of two or more discreet persons as witnesses, and shall then and there reduce or cause to be reduced, to writing, every fact and circumstance tending to show the condition of the body and the cause and manner of death, together

with the names and addresses of said witnesses, which record he shall subscribe. Before making such autopsy he shall call the attention of the witnesses to the position and appearance of the body.

Sec. 9. Should the medical examiner deem it advisable to have present a physician as one of the witnesses, as aforesaid, such physician shall also subscribe the record made by the medical examiner, and for such service he shall receive a compensation of five dollars.

[Sections 10 to 21, inclusive, relate to the appointment of coroners, and their duties.]

Sec. 22. If a medical examiner reports that a death was not caused by the act or neglect of some person other than the deceased, and the Attorney-General is of a contrary opinion, the Attorney-General may, notwithstanding such report, direct an inquest to be held in accordance with the provisions of this act, at which inquest he, or some other person designated by him, shall examine all the witnesses.

Sec. 23. The medical examiner may, if he deem it necessary, employ a chemist to aid in the examination of the body, or of substances supposed to have caused or contributed to the death, and such chemist shall be entitled to such compensation for his services as the medical examiner certifies to be just and reasonable, the same being audited and allowed in the manner hereinafter provided.

Sec. 24. When a medical examiner views or makes an examination of the dead body of a stranger, he shall cause the body to be decently buried, and if he certifies that he has made careful inquiry, and that to the best of his knowledge and belief the person found dead is a stranger, having no settlement in any town of the State, his fees, with the actual expense of burial, shall be paid from the general treasury. In all other cases the expense of the burial shall be first paid by the town wherein the body is found, and such town may recover the money so paid from the town where such person last had a settlement. Provided, however, that the General Treasurer or any town ultimately paying any such burial expenses shall have the right to recover such burial expenses from the estate of the deceased person.

Sec. 25. When services are rendered in bringing to land the dead body of a person found in any of the harbors, rivers or waters of the State, the medical examiner may allow such compensation for such services as he deems reasonable; but this provision shall not entitle any person to compensation for services rendered in searching for a dead body.

Sec. 26. In all cases arising under the provisions of this act, the medical examiner shall take charge of any money or other personal property of the deceased, found upon or near the body, and shall deliver the same to the person entitled to its custody or possession; or, if not claimed by such person within sixty days, then to an administrator, to be administered upon according to law.

Sec. 27. A medical examiner who fraudulently neglects or refuses to deliver any such property within three days after demand upon him therefor, shall be imprisoned not exceeding two years, or be fined not exceeding five hundred dollars.

Sec. 28. The fees of coroners shall, for the services specified in this act, be as follows, namely: For receiving and filing a duly attested copy of the record of an autopsy, fifty cents; for every page of two hundred words of written testimony, thirty cents; for each day's attendance in holding the inquest, five dollars; for the recognition of witnesses, thirty-five cents; and for drawing up and filing a report in court, five dollars. Said fees having been audited by the State Auditor upon certificate of the Attorney General, shall be paid by the General Treasurer.

Sec. 29. Each medical examiner shall receive fees as follows: For a view without an autopsy, four dollars; for a view and an autopsy, thirty dollars; and for travel, at the rate of ten cents a mile to the place of view. He shall also have power, in case of an autopsy, to employ a clerk, at an expense not exceeding three dollars per day for each day's actual service.

Sec. 30. Every medical examiner shall return an account of the expenses of each view or autopsy, including his fees, to the State Auditor, and shall annex to his return the written authority under which the autopsy was made. The State Auditor shall audit such account and certify to the General Treasurer what items in such account are deemed just and reasonable, and such items shall be paid by said treasurer to the persons entitled to receive the same.

Sec. 31. Chapter 250 of the Public Statutes, entitled "Of Coroners and their Inquests," and all acts and parts of acts inconsistent herewith, are hereby repealed.

Sec. 32. This act shall take effect on the first day of July, A. D. 1884, provided that so much thereof as relates to the appointment and qualification of medical examiners shall take effect immediately.

MEDICAL COLLEGE OF SOUTH CAROLINA, Charleston, S. C., organized in 1824; charter obtained in 1823. Permanently closed in 1839. During its existence its graduates amounted to 313. Dr. J. Ford Prioleau, dean of the Medical College of the State of South Carolina, writes: The Medical College of South Carolina was organized under the auspices and control of the Medical Society of South Carolina, which elected the professors and examined the candidates for graduation of the college. In filling two vacancies the society gave offense to the other members of the faculty, which was increased by a difference of opinion relative to the status of some of the applicants for graduation; and in 1833 the faculty resigned in a body, and established another school, under the title of the "Medical College of the State of South Carolina"—having obtained a charter in 1832, and giving its first course in 1834.

The Medical Society elected the members of the faculties of both colleges, which continued in activity in the city of Charleston until 1839, when, having gradually declined in

number of students, the Medical College of South Carolina compromised with the Medical College of the State of South Carolina, and permanently closed its doors.

Both these institutions were known and referred to as the "Charleston Medical College;" but, except in this manner, there was no college having such a corporate title.

VIRGINIA has recently enacted the following

### Act to Regulate the Practice of Medicine and Surgery. \*

*Be it enacted by the General Assembly of Virginia:*

1. There shall be for this State a Board of Medical Examiners, consisting of three members from each Congressional district in the State, and two from the State at large, whose term of office shall be four years, or until their successors are appointed and qualified. The term of office of the board first appointed shall commence on the first day of January, 1885.

2. The said board shall consist of men learned in medicine and surgery, and shall be appointed by the Governor on the first day of November, 1884, and every fourth year thereafter, from a list of names to be recommended by the Medical Society of Virginia. Vacancies occurring in such board for unexpired terms shall be filled in the same manner. Such recommendations shall be by the votes of a majority present at some meeting of said society, and the same shall be certified to the Governor by the president and secretary of such meeting. Provided, however, that in case such society fail to make such recommendations prior to the time of appointment, or if the Governor shall, in any case, consider the person so recommended, or any of them, unsuitable, then he shall appoint such board, either in whole or in part, without regard to such recommendations.\* If any of said examiners shall cease to reside in the district for which he was appointed, it shall vacate his office.

3. The members of said Board of Medical Examiners shall qualify and take usual oath of office before the county or corporation court of the county or corporation in which they shall respectively reside. The officers of said board shall be a president, vice-president and secretary (who shall also act as Treasurer)—such officers to be members of and elected by said board. The first meeting of the same shall be at Richmond, at such time as the Governor shall notify the members by mail to assemble. Subsequent regular meetings shall be at such times and places as the board may prescribe, and special meetings may be had upon the call of the president and two members; but there shall not be less than one regular meeting per annum. Five members of said board shall be a quorum; said board may organize at its first meeting, and may, at its first or any subsequent meeting, prescribe rules, regulations and by-laws for its own proceedings and government, and for the examination of candidates for the practice of medicine and surgery by its individual members.

4. It shall be the duty of said board, at any of its meetings, and of the individual members of said board, at any time, to examine all persons making applications to them, who shall desire to commence the practice of medicine or surgery in this State. When the examination is by an individual member of the board, he shall report the result of the same to the president thereof; and when an applicant shall have passed an examination satisfactory as to proficiency before three individual members of said board, or before the board in session, the President thereof shall grant to such applicant certificate to that effect. A fee to be prescribed by said board, but not to exceed five dollars, shall be paid to said board (through such officers or members as it may designate, by each applicant before such examination is had. In case any applicant shall fail to pass a satisfactory examination before the board or before the three individual members to whom he shall first apply, he shall not be permitted to stand any further examination within the next three months thereafter; provided, however, no applicant shall be rejected upon his examination on account of his adherence to any particular school of medicine or system of practice, nor on account of his views as to the method of treatment and cure of diseases.

5. The fund realized from the fees aforesaid shall be applied by the board towards its expenses, including a reasonable compensation to the president and secretary.

6. Any person who shall obtain a certificate as aforesaid from the president of said board, shall cause his name to be registered in the clerk's office of the county or corporation court for the county or corporation in which he shall reside; and it shall be the duty of said clerk to register the name of every such person presenting such certificate, together with the date thereof and the name of the president of the board signing the same, in a book kept for that purpose as a part of the records of his court, which shall also give the date of each registration, and his fee for each registration shall be one dollar, to be paid by the person whose name is registered.

7. No person who shall commence the practice of medicine or surgery after the first day of January, 1885, shall practice as a physician or surgeon for compensation without having first obtained a certificate and caused his name to be registered as aforesaid. Any person violating the provisions of this section shall pay a fine of not less than fifty nor more than five hundred dollars for each offence, and shall be debarred from receiving any compensation for services rendered as such physician or surgeon.

8. Any person who shall have been assessed with a license tax as a physician or surgeon by any commissioner of the revenue in this State at any time prior to the first day of January, 1885, shall be taken as having commenced the practice of medicine or surgery prior to that date; but any person who shall not have been assessed shall be taken as not having commenced such practice prior to that date.

\*Amended then, so as to give the State Medical Society three months in which to make new nominations.



9. Any physician or surgeon who shall commence to practice after the first day of January, 1885, and who shall reside in an adjoining State within ten miles of the boundary lines of this State, shall be entitled to stand the examination and receive the certificate hereinbefore provided for, and such certificate shall be registered as hereinbefore provided—in that county in this State which is nearest his place of residence; and such certificate and registration shall make it lawful for him to practice medicine and surgery.

10. Nothing in this act shall be taken as including or affecting in any way the practice of dentistry, nor shall it include physicians or surgeons residing in other States and called in consultation in a special case with a physician or surgeon residing in this State; nor shall it be construed as affecting or changing in any way the laws in reference to the license tax to be paid by physicians, surgeons and dentists.

#### DURATION OF LECTURE TERMS.

The duration of the regular lecture terms, not deducting vacations and holidays, varies in many cases from that given in the body of this section (*ante*) where such deductions have been made. Appended will be found the duration as given in the college announcements wherever these variations are of sufficient importance.

*Twenty weeks.*—Eclectic Medical Institute; Cincinnati, O. Medical College of the State of South Carolina; Charleston, S. C.

*Five months.*—Medical College of Alabama; Mobile, Ala. Medical Department, Arkansas Industrial University; Little Rock, Ark. National Medical College; Washington, D. C. Medical Department, Howard University; Washington, D. C. Beach Medical College (Eclectic); Indianapolis, Ind. Minnesota College Hospital; Minneapolis, Minn. Missouri Medical College; St. Louis, Mo. American Medical College (Eclectic); St. Louis, Mo. Northwestern Medical College of St. Joseph; St. Joseph, Mo. St. Joseph Medical College; St. Joseph, Mo. Eclectic Medical College of the City of New York. Meharry Medical Department, Central Tennessee College; Nashville, Tenn.

*Twenty-one weeks.*—Rush Medical College; Chicago, Ill. Medical College of Evansville; Evansville, Ind. Central College of Physicians and Surgeons; Indianapolis, Ind. Louisville Medical College; Louisville, Ky. Homeopathic Medical College of Missouri; St. Louis, Mo. St. Louis College of Physicians and Surgeons; St. Louis, Mo. Physio-Medical Institute, Cincinnati, O. Medical Department, University of Nashville and Vanderbilt University; Nashville, Tenn. Nashville Medical College; Nashville, Tenn.

*Twenty-two weeks.*—Medical College of Indiana; Indianapolis, Ind. Medical Department, State University of Iowa; Iowa City, Ia. Homeopathic Medical Department, State University of Iowa; Iowa City, Ia. Medical Department, University of Louisiana; New Orleans, La. College of Physicians and Surgeons; Baltimore, Md. Kansas City Medical College; Kansas City, Mo. Medical Department, University of Buffalo; Buffalo, N. Y. Memphis Hospital Medical College; Memphis, Tenn.

*Twenty-three weeks.*—Iowa College of Physicians and Surgeons; Des Moines, Ia. St. Louis Medical College; St. Louis, Mo. Medical Department, University of the City of New York. Medical College of Ohio; Cincinnati, O. Pulte Medical College (Homeopathic); Cincinnati, O. Woman's Medical College of Pennsylvania; Philadelphia, Pa.

*Twenty-four weeks.*—Physio-Medical College of Indiana; Indianapolis, Ind. Fort Wayne College of Medicine; Fort Wayne, Ind. School of Medicine, University of Maryland; Baltimore, Md. Albany Medical College; Albany, N. Y.

*Twenty-five weeks.*—Detroit Medical College; Detroit, Mich. Cincinnati College of Medicine and Surgery; Cincinnati, O.

*Twenty-six weeks.*—Columbus Medical College; Columbus, O. Jefferson Medical College; Philadelphia, Pa. Hahnemann Homeopathic; Philadelphia, Pa.

*Six months.*—California Medical College (Eclectic); Oakland, Cal. Bennett College of Eclectic Medicine and Surgery; Chicago, Ill.\* Michigan College of Medicine; Detroit, Mich. Omaha Medical College; Omaha, Neb. Starling Medical College; Columbus, O. Medico-Chirurgical College of Philadelphia, Pa. Medical College of Virginia; Richmond, Va.

*Twenty-seven weeks.*—Bellevue Hospital Medical College; New York City.

*Seven months.*—College of Physicians and Surgeons in the City of New York.

*Thirty weeks.*—Woman's Medical College; Baltimore, Md.

*Thirty-one weeks.*—College of Physicians and Surgeons; Boston, Mass.

*Eight months.*—Homeopathic Department of Medicine and Surgery, University of Michigan; Ann Arbor, Mich.

*Thirty-four weeks.*—Medical Department, University of Georgetown; Washington, D. C.

*Thirty-six weeks.*—Medical Department, University of Virginia; Charlottesville, Va.

*Nine months.*—Medical Department, University of Colorado; Boulder, Col. Department of Medicine and Surgery, University of Michigan; Ann Arbor, Mich.

*Miscellaneous.*—Cooper Medical College; San Francisco, Cal.—begins June 1, closes November 1. University of California Medical College; San Francisco, Cal.—begins February 1, closes October 31. Atlanta Medical College; Atlanta, Ga.—begins October 11, closes March 1. Southern Medical College; Atlanta, Ga.—begins first week in October,



ends first week in March. Quincy College of Medicine; Quincy, Ill.—begins second Monday in October, ends last Wednesday in March. Kentucky School of Medicine; Louisville, Ky.—begins February 11, ends June 21. Hospital College of Medicine; Louisville, Ky.—begins January 10, ends June 5. Boston University School of Medicine; Boston, Mass.—annual course of thirty "working" weeks' duration. Long Island College Hospital; Long Island, N. Y.—the reading term is thirteen weeks' duration.

## AUXILIARY AND POST-GRADUATE INSTITUTIONS AND COURSES.

### AUXILIARY DEPARTMENT OF MEDICINE, UNIVERSITY OF PENNSYLVANIA.

Philadelphia, Pa.

Organized in 1865.—Faculty consists of five professors.

**COURSE OF INSTRUCTION**—although strictly collateral to medicine, is largely scientific in its character, and the degree of bachelor of science (B. S.) is conferred upon those graduates in medicine of the university, or of other recognized schools, who attend two full courses in the auxiliary department, pass a satisfactory examination before the faculty, and present an original thesis on some one of the subjects taught. These latter comprise medical jurisprudence and toxicology; mineralogy and geology (including a practical course on mineralogical and geological chemistry); botany, hygiene, comparative anatomy and zoology. The session for 1884 will begin in March and continue until the early part of June.

**FEES:** Lectures are free to all matriculates and graduates of the medical department of the university; to all others, \$10 is charged for each professor's ticket, or \$35 for the course. Graduation, \$10.

### POST-GRADUATE INSTRUCTION, MEDICAL DEPARTMENT, UNIVERSITY OF PENNSYLVANIA.

Philadelphia, Pa.

Established in 1880—although for many years previous a post-graduate course was afforded during the spring and early summer.—Faculty consists of eight professors and ten lecturers.

**COURSE OF INSTRUCTION**—divided into three terms of eight weeks each, beginning in January, April and March—consists in bedside and dispensary lessons, in the practical examination of patients, and the use of instruments of precision in the diagnosis and treatment of disease. The following subjects are taught: Clinical medicine and physical diagnosis; renal disease, with practical examination of urine; nervous diseases and electro-therapeutics; clinical surgery; ophthalmology; dermatology; otology; gynecology; operative and genito-urinary surgery, with venereal diseases; clinical and operative obstetrics; laryngology; diseases of children.

**FEES:** Matriculation, \$5 (matriculates of the university exempt); full course, eight weeks, \$150; sixteen weeks, \$200; individual subjects, \$10 to \$25.

### NEW YORK POLYCLINIC.

New York City.

See *ante*, page 159.

### NEW YORK POST-GRADUATE MEDICAL SCHOOL.

New York City.

See *ante*, page 159.

## PHILADELPHIA POLYCLINIC AND COLLEGE FOR GRADUATES IN MEDICINE.

Philadelphia, Pa.

See *ante*, page 159.

## COLLEGE FOR MEDICAL PRACTITIONERS.

St. Louis, Mo.

See *ante*, page 159.

## BALTIMORE POLYCLINIC AND POST-GRADUATE MEDICAL SCHOOL.

Baltimore, Md.

Organized in 1884. Practical instruction to physicians and advanced students in all the branches of medicine and surgery.—Faculty consists of thirteen professors and thirteen assistants. Daily clinics—except Sunday; dispensary practice; an "out-door obstetrical department;" no didactic lectures; each course, four weeks' duration.

FEES: Surgery, genito-urinal and rectal surgery, diseases of the throat and chest, diseases of the eye and ear, dermatology and syphilis, general practice of medicine and urinary pathology, orthopedic surgery, diseases of children, \$10 each; gynecology and obstetrics, \$15; operative surgery and topographical anatomy, \$20. Material for dissection by special arrangement.

The following-named institutions also have post-graduate courses, or other facilities for instruction for practitioners:

RUSH MEDICAL COLLEGE, Chicago, Ill.—A four weeks' course; fees, \$30.

CHICAGO MEDICAL COLLEGE, Chicago, Ill.—A four weeks' course; fees, \$30.

HAHNEMANN MEDICAL COLLEGE, Chicago, Ill.—A six weeks' course; fees, \$30.

COLLEGE OF PHYSICIANS AND SURGEONS OF CHICAGO.—A four weeks' course; fees, \$25.

MEDICAL DEPARTMENT, UNIVERSITY OF LOUISVILLE, Louisville, Ky.—A six weeks' course, \$40.

MEDICAL SCHOOL OF HARVARD UNIVERSITY, Boston, Mass.—Six months' course in histology, (\$20); physiology, (\$30); medical chemistry, (\$30); pathological anatomy, (\$20); surgery, (\$25); laryngology, (\$20); ophthalmology, (\$25); otology, (\$15); dermatology, (\$25); syphilis, (\$15); diseases of the nervous system, (\$15); gynecology, (\$25); obstetrics, (\$25). Graduates of other medical schools may obtain the degree of M. D., Harv., after a year's study in the graduates' course, as above. Fee for full year, \$200.

HOMEOPATHIC MEDICAL COLLEGE OF MISSOURI, St. Louis, Mo.—A six weeks' course; fees, \$25.

ST. LOUIS COLLEGE OF PHYSICIANS AND SURGEONS, St. Louis, Mo.—"In order to obviate the necessity of a post-graduate course, the professors of this school will form classes for private instruction of advanced students and practitioners." \* \* \*

BELLEVUE HOSPITAL MEDICAL COLLEGE, New York City.—Private instructions in medical and in physical diagnosis, \$20 each; surgical operations, (\$30); operative surgery and surgical dressings, (\$20); diseases of the eye and ear, (\$30); diseases of the heart, lungs and throat, (\$12); laryngoscopy, (\$10); and diseases of women, (\$50); "intended mainly for the benefit of practitioners." \* \* \*

MEDICAL DEPARTMENT, WESTERN RESERVE UNIVERSITY, Cleveland, O.—A five weeks' course; fees, \$25.

JEFFERSON MEDICAL COLLEGE, Philadelphia, Pa.—A post-graduate course of instruction, including five terms of seven weeks each. Instruction in ophthalmology, otology, gynecology, physical diagnosis, diseases of the chest, orthopedic surgery, normal and pathological histology, diseases of children, laryngology, urinary pathology, medical chemistry, practical pharmacy, experimental physiology, dermatology, botany, materia medica and experimental therapeutics. Fees range from \$10 to \$20.

## LIST OF COLLEGES FOR WOMEN ONLY.

Women's Medical College, Toronto, Ont.

Women's Medical College, Kingston, Ont.

Women's Medical College of Chicago, Chicago, Ill.

Women's Medical College of Baltimore, Baltimore, Md.  
 Women's Medical College of the New York Infirmary, New York City.  
 New York Medical College and Hospital for Women (Homeopathic), New York City.  
 Women's Medical College of Pennsylvania, Philadelphia, Pa.

#### LIST OF COLLEGES FOR BOTH SEXES.

The following institutions either announce that they are open to both sexes, or had both in attendance during the last session:

Cooper Medical College, San Francisco, Cal.  
 University of California Medical College, San Francisco, Cal.  
 California Medical College (Eclectic), San Francisco, Cal.  
 Medical Department of the University of Denver, Denver, Col.  
 Medical Department of the University of Colorado, Boulder, Col.  
 Medical Department of Howard University, Washington, D. C.  
 Georgia Eclectic Medical College, Atlanta, Ga.  
 College of American Medicine and Surgery, Atlanta, Ga.  
 Hahnemann Medical College and Hospital, Chicago, Ill.  
 Fort Wayne College of Medicine, Fort Wayne, Ind.  
 Indiana Eclectic Medical College, Indianapolis, Ind.  
 Physio-Medical College of Indiana, Indianapolis, Ind.  
 College of Physicians and Surgeons, Keokuk, Ia.  
 Medical Department of the State University, Iowa City, Ia.  
 Homeopathic Medical Department of the State University, Iowa City, Ia.  
 Iowa College of Physicians and Surgeons, Des Moines, Ia.  
 Iowa Medical College (Eclectic), Des Moines, Iowa.  
 Eclectic Medical College of Maine, Lewiston, Me.  
 College of Physicians and Surgeons, Boston, Mass.  
 Boston University School of Medicine, Boston, Mass.  
 Department of Medicine and Surgery of the University of Michigan, Ann Arbor, Mich.  
 Homeopathic Medical College of the University of Michigan, Ann Arbor, Mich.  
 Minnesota College Hospital, Minneapolis, Minn.  
 Joplin College of Physicians and Surgeons, Joplin, Mo.  
 Homeopathic Medical College of Missouri, St. Louis, Mo.  
 Omaha Medical College, Omaha, Neb.  
 Medical Department of the University of Nebraska, Lincoln, Neb.  
 College of Medicine of Syracuse University, Syracuse, N. Y.  
 Medical Department of Shaw University, Raleigh, N. C.  
 Medical Department of the University of Wooster, Cleveland, Ohio.  
 Columbus Medical College, Columbus, O.  
 Pulte Medical College (Homeopathic), Cincinnati, O.  
 Eclectic Medical Institute, Cincinnati, O.  
 Physio-Medical Institute, Cincinnati, O.  
 Medical Department of the Willamette University, Portland, Or.  
 Meharry Medical Department of Central Tennessee College, Nashville, Tenn.

#### LIST OF COLLEGES FOR COLORED STUDENTS.

Medical Department of Shaw University, Raleigh, N. C.  
 Meharry Medical Department of Central Tennessee College, Nashville, Tenn.

The Medical Department of Howard University, Washington, D. C., is open to all, "without distinction of sex or race."

LIST OF COLLEGES WHICH CONFER DEGREES UPON ATTENDANCE ON  
SUMMER SESSIONS.

Cooper Medical College, San Francisco, Cal. Session begins June 1, and closes November 1.

University of California Medical College, San Francisco, Cal. Session begins February 1 and closes November 1.

Iowa Medical College (Eclectic), Des Moines, Ia. Session begins January 1 and closes June 1.

Kentucky School of Medicine, Louisville, Ky. Session begins February 11 and closes June 23.

Hospital College of Medicine, Louisville, Ky. Session begins January 10 and closes June 2.

Medical School of Maine, at Bowdoin College, Brunswick, Me. Session begins February 7 and closes June 1.

Medical Department of Dartmouth College, Hanover, N. H. Session begins August 1 and closes December 1.

Long Island College Hospital, Brooklyn, N. Y. Session begins January 2 and closes May 21.

Toledo Medical College, Toledo, O. Session begins March 1 and closes July 19.

Eclectic Medical Institute, Cincinnati, O. Session begins January 14 and closes June 10.

Medical Department of the University of Wooster, Cleveland, O. Session begins February 13 and closes July 3.

Medical Department of the University of Vermont, Burlington, Vt. Session begins March 1 and closes July 1.

To the List of Institutions not Recognized by the ILLINOIS STATE BOARD OF HEALTH, on page 5, should be added the Joplin College of Physicians and Surgeons, Joplin, Mo., (now extinct), and the Kansas City Hospital College of Medicine, Kansas City, Mo.

*In the compilation of data concerning Medical Education and the Regulation of the Practice of Medicine, valuable assistance has been received from Dr. George N. Kreider, of Springfield.*



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THE SMALL-POX EPIDEMIC.

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## THE SMALL-POX EPIDEMIC, 1880-82.\*

For several months prior to the close of the year 1879, the United States had been practically free from small-pox. From May to December inclusive, of that year, there were only five places in which cases of the disease had been reported. In New York there was one death during the week ended May 31; seven between June 7 and 21; six during August, and one in the week ended November 15. During the intervening periods up to October 4, there was no death reported from the disease in any part of the United States. In October, the contagion was brought into San Antonio from Mexico, and seven deaths (all Mexicans) occurred in that month, and four more in November. During December there were cases (nine deaths reported) in Philadelphia, Washington and Chicago, making a total of thirty-five deaths during the eight months, out of an aggregate of 504,595 deaths from all causes. So that it may be said that, during the year 1879, the small-pox contagion did not exist in the United States as a factor of the public health question.

On the other hand, consular and other reports to the National Board of Health, the pages of medical and sanitary journals, and other mediums of information, show a widespread and increasing prevalence of the disease in Europe, Africa, South America and Canada, during the period above specified. A total of about 2,500 deaths were thus reported between May and December, 1879, and the following places were infected during this period:

London, Liverpool, Edinburg, Newcastle-on-Tyne and Dublin, in the British Islands.

Antwerp, Barcelona, Breslau, Brussels, Bucharest, Buda Pesth, Copenhagen, Dantzic, Dresden, Lisbon, Malaga, Naples, Paris, Rotterdam, Stockholm, Trieste, Turin, Venice, Vienna and Warsaw, on the Continent.

Algiers, Tangiers and Tripoli, in Africa.

Bahia, Callao, Iquique, Panama, Para, Pernambuco and Rio de Janeiro, in South America.

Havana and Santa Cruz, in the West Indies.

Matamoras and Tampico, in Mexico.

Montreal and St. John's, in Canada.

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\*The term "epidemic" is herein used in its popular and conventional sense—not as implying that a disease which only spreads through its own contagion, as does small-pox, can ever be strictly or accurately called an epidemic disease; but simply that, during the period treated of, there was an unusual prevalence and a rapid spread of small-pox, two conditions prominently characteristic of epidemics.

Delays, arising from various causes elsewhere explained, have afforded an opportunity of including in this report all the cases reported in the State during 1883; so that the period actually covered is from the date of the first case in Illinois, November, 1879, up to December 31, 1883.

## ITS INCEPTION AND PROGRESS IN ILLINOIS.

The solitary death from small-pox in Illinois, in 1879, was due to an immigrant, who arrived in Chicago, in the eruptive stage of the disease, about the last of November of that year.\* From this introduction there resulted cases in January, February and March, 1880, but without any other death; and the contagion was believed to have been substantially eradicated, when several arrivals of infected immigrants, in April, caused a new outbreak, which was still further added to, from the same source, during May and June, and again in October and November. With the revival of immigration in the spring of 1881, the disease, which had been kept under control during the winter months of 1880-81, rapidly increased in Chicago, and occasional cases began to appear at other points in the State. In July and August, 1881, however, only four new outbreaks occurred in the State at large, and, in September, three; but in October a heavy immigration movement began; the disease rapidly increased in Chicago, and five new points were infected in the State during the month, twelve more in November, and twenty-eight in December.

During the year there were 79 different outbreaks reported, outside of Chicago, causing an aggregate of 774 cases, with 170 deaths; and in all but six of these outbreaks the origin was directly traced either to newly-arrived immigrants or to intercourse with places previously infected by immigrants.

At the November, 1881, meeting of the BOARD, the situation was fully discussed. The necessity for aiding local health authorities, in very many localities, by instruction, advice and information concerning their duties, powers and responsibilities; the want of familiarity, on the part of many of these authorities, with the proper method of dealing with an outbreak so as to secure its prompt suppression; their failure or inability, of themselves, to coöperate with each other in adjoining infected or threatened localities; the evidence of the existence of a very large percentage of unvaccinated, or imperfectly vaccinated, among the population, both of adults and of school children; the dangers existing and threatened, through the unprecedented influx of immigrants arriving in the State without any previous sanitary supervision; and other important features of the situation, were duly considered.

As a result of these deliberations it was decided that such a sanitary emergency existed as justified the exercise of all the powers and resources at the command of the BOARD. An order was adopted looking to securing the vaccination or revaccination of all public scholars prior to the beginning of the new school year, January 1, 1882; local health authorities were repeatedly advised of their powers, duties and responsibilities, and of their relations to each other and to the STATE BOARD; circular letters urging vaccination and revaccination of all employes, and others under control, were addressed to railroad and steamboat managers and superintendents, manufacturers, mill-owners, iron-masters, quarry-workers, and employers generally, and to the officers of all public institutions; the

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\*See Chicago, in "Details of Local Outbreaks." Also, "Immigrant-Introduction of Small-Pox."



official order of the BOARD, Concerning the Prevention of Small-Pox, originally issued in March, 1881, was revised, enlarged and distributed to all infected and threatened localities; editions of this order were also prepared in the German and in the Scandinavian languages; and, in addition to all this, persistent effort was made to secure the assistance of the National authority in establishing a system of sanitary surveillance of immigrant travel, with especial reference to the prevention of the introduction of small-pox into the United States from foreign countries.\*

By the middle of January these various agencies, with the exception of the immigrant inspection, were fairly under way; but during that month there was a large increase in the number of new outbreaks reported, the great majority, however, being in the first part of the month, 39 out of the total being reported on or before the 16th. On the 24th of January—up to which time from January 1, 1881, there had been 130 outbreaks reported—the Secretary summed up the situation, as follows, in a letter to Dr. Stephen Smith, of the National Board of Health, in response to a request for such information:

\* \* \* \* \* “Since November, small-pox has been introduced from Chicago, St. Louis, Kentucky, Iowa (Keokuk Medical College), and the Ohio and Mississippi rivers, into nearly one hundred different localities in this State. Outside of Chicago and Cook county, the disease has been confined to the first cases, except in four instances. Chicago and Cook county are practically the same, and in that territory it has not seemed desirable or necessary that the STATE BOARD should interfere. In the four instances outside of Cook county, where the disease has spread beyond the first cases, the result is as directly attributable to the failure to carry out the instructions of the STATE BOARD as its limitation—its practical ‘stamping-out’—in the remaining ninety-odd places is due to the observance and enforcement of these instructions and precautions. To-day, in a population of nearly three million souls (exclusive of Cook county), there are not, at the outside, five hundred cases of small-pox and varioloid. For three days we have had reports of no new points of infection, and have every reason to believe that, in the State at large, we have control of the disease.

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\* In June, 1881, the following circular-letter had been sent to various State and municipal Boards of Health, and to the National Board:

ILLINOIS STATE BOARD OF HEALTH,  
SPRINGFIELD, June 13, 1881.

Dr. ———:

You are respectfully invited (or a representative of your Board) to attend a conference of State and local boards of health, on June 29th, at the Grand Pacific hotel in Chicago. The question of concert of action between local and State boards of health and the National Board of Health, will be considered, and a plan submitted to prevent the introduction of small-pox into this country, and to prevent the spread of the same.

It is unnecessary to say how much we are all interested in this subject.

The prevalence of small-pox at this time is a disgrace, and unless more energetic measures are taken, it will continue to increase so long as immigration is pouring into this country as at present.

Very respectfully yours,

JOHN H. RAUCH, M. D., *Secretary.*

For the report of the proceedings had at this Conference, see pp. 119-130, *Fourth Annual Report*, ILLINOIS STATE BOARD OF HEALTH.

"As a result of our School-Vaccination Order, the State Superintendent of Public Instruction agrees with me in the estimate that about 600,000 school children have been efficiently vaccinated—mainly with bovine virus—by competent physicians, who have been obliged to certify to the *result* of their work, and not merely that they have performed the operation. This, in itself, constitutes a new departure in vaccination in this country, where the requirement (for school purposes) has usually been complied with in a careless and perfunctory manner. In only two instances, out of the 12,000 in the State, are schools now closed on account of the disease, although in very many instances they were closed on the first appearance of the contagion, but were immediately re-opened under advice from this office that an enforcement of vaccination was the best and only safeguard. \* \* \* \*

"The efforts of the BOARD have met with surprisingly little opposition. Where such existed, the appearance of the first case of small-pox soon converted opponents into staunch supporters. Of course, measures so radical and comprehensive have not been put into operation without an immense amount of work, and the employment of all possible resources. \* \* \* \*

"I send you copies of our orders, blanks, etc. Of Nos. 50 and 50 A (the School-Vaccination Order), 45,000 copies have been distributed; of No. 51 (the School-Vaccination Certificate), over 700,000; and of No. 53 (Concerning the Prevention of Small-Pox), over 75,000, in English, German and Scandinavian.

"Much of this work has been pioneer, and all of it educational. I doubt if the people of any other State of equal age are as well protected against small-pox as those of Illinois at the present time.

"Necessarily, our first efforts were largely tentative; we had to feel our way, to merely advise where we can now direct; to argue and warn, where we can now speak with the assurance which comes of success. The hardest part of our work is done. Our machinery is all in operation, and we are sanguine as to the result."

The confidence expressed in the foregoing letter proved well-founded. Only seven more new outbreaks were reported during the rest of the month, making a total of 58 places infected during January. In February the number fell to 24; in March, to 21; in April, to 14; in May and June, to 8 and 7, respectively. In the latter month, the Immigrant-Inspection Service of the National Board of Health was organized, and thenceforward the most prolific and dangerous source of small-pox introduction and dissemination was practically cut off during the maintenance of this Service.

An occasional new outbreak continued to be reported at long intervals until the advent of cold weather, when there was again an increase in the number, attaining its maximum in February, 1883, when seven newly-infected places were reported, three of these by immigrants—the Immigrant-Inspection Service having been discontinued at the close of December, 1882, on account of the failure of Congress to make the necessary appropriation for its further maintenance. (For the details of the operations of the Service, see section entitled "Immigrant-Inspection Service, National Board of Health.")

## SUMMARY.

Exclusive of Chicago, 306 separate introductions of the disease, into 138 different localities, in 77 counties were reported to the BOARD during the existence of the epidemic. Concerning 251 of these introductions, into the 193 places, the details of information, as to date, origin and locality, have been tabulated, as follows:

1.—*Number of Introductions by Months, January, 1881-December, 1883.*

Months.	Introductions.	Months.	Introductions.
1881. January.....	5	1882. July.....	2
February.....	4	August.....	3
March.....	6	September.....	1
April.....	4	October.....	1
May.....	5	November.....	2
June.....	3	December.....	2
July.....	2		
August.....	2	1883. January.....	5
September.....	3	February.....	7
October.....	5	March.....	5
November.....	12	April.....	1
December.....	28	May.....	3
		June.....	3
1882. January.....	58	July.....	0
February.....	24	August.....	1
March.....	21	September.....	1
April.....	14	October.....	1
May.....	8	November.....	1
June.....	7	December.....	1

2.—*Origin of Introductions, January, 1881-December, 1883.*

Origin.	Number.	Origin.	Number.
Chicago.....	72	Cincinnati.....	4
Missouri (including St. Louis, 24).....	26	New Orleans.....	2
Immigrant.....	24	Indiana.....	2
Intra-State (from point to point in Illinois).....	21	Wisconsin.....	2
Iowa (including Keokuk, 13).....	20	Arkansas.....	1
Not stated.....	19	Canada.....	1
Railway travel and service.....	17	Michigan.....	1
Tramp.....	13	Nebraska.....	1
Unknown.....	11	Ocean travel.....	1
River travel and service.....	6	Peddler.....	1
Kentucky.....	4	Pennsylvania.....	1
		Wyoming Territory.....	1

As one of the most noteworthy features of this epidemic, the sudden reduction in the number of new introductions, above indicated, for the month of February, 1882, is made the subject of a diagrammatic representation on the two following pages. It may be here remarked that this reduction is equivalent to a decline of 58.8 per cent. in the number of cases; while the average reduction from January to February, in other epidemics, for 32 years previous (18.1-1882 inclusive), is only 15.1 per cent. The import of these figures is set forth in the remarks on the Cost of the Epidemic, pages 218-220.

DIAGRAM showing the number of New Points infected, and New Introductions of Small-Pox into Places previously infected, during each Month from January, 1881, to December, 1883, inclusive.





TABLE showing Origin of Infection in New Points infected, and in New Introductions into Places previously infected, during each Month, from January, 1881, to December, 1883, inclusive.

Months.	Origin of Infection.	Number of Introductions.
1881.	January..... Chicago 2, Immigrant 2, Iowa 1.	5
February..... Chicago 1, intra-State 1, railway 1, not stated 1		4
March..... Intra-State 2, railway 2, Chicago 1, Iowa 1.		4
April..... Railway 1, Iowa 1, unknown 1, not stated 1.		4
May..... Immigrant 2, Chicago 1, railway 1, Wisconsin 1.		4
June..... St. Louis 1, immigrant 1, Iowa 1.		3
July..... Chicago 1, not stated 1.		2
August..... Chicago 2.		2
September..... Chicago 2, railway 1.		3
October..... Chicago 3, unknown 1, not stated 1.		4
November..... Chicago 6, railway 3, intra-State 1, St. Louis 1, New Orleans 1.		5
December..... Chicago 10, Iowa 6*, St. Louis 4, Keokuk, Ia., 7, not stated 7, tramp 5, unknown 4, immigrant 4, Indiana 2, Ken-		28
1882.	January..... Chicago 13, intra-State 8, Keokuk, Ia., 7, not stated 7, tramp 5, unknown 4, immigrant 4, Indiana 2, Ken-	58
February..... Chicago 13, tramp 5, not stated 2, river 1, Missouri 1, Arkansas 1, Keokuk, Ia., 1		21
March..... Chicago 9, immigrant 3, intra-State 2, river 2, railway 2, not stated 2, St. Louis 1.		21
April..... Chicago 4, immigrant 4, St. Louis 3, intra-State 1, unknown 2		14
May..... St. Louis 2, railway 2, Chicago 1, Cincinnati 1, intra-State 1, not stated 1		8
June..... Immigrant 2, St. Louis 1, Iowa 1, tramp 1, railway 1, river 1.		7
July..... Missouri 1, Iowa 1.		2
August..... Ocean travel 1, intra-State 1, St. Louis 1.		3
September..... Cincinnati 1.		3
October..... Chicago 1.		1
November..... Not stated 1, railway 1.		1
December..... Chicago 1, not stated 1.		2
1883.	January..... Chicago 1, Kentucky 1, Nebraska 1, peddler 1, unknown 1.	5
February..... Immigrant 3, St. Louis 1, Wisconsin 1, tramp 1, unknown 1.		7
March..... Immigrant 1, St. Louis 1, Kentucky 1, New Orleans 1, Wyoming Territory 1.		5
April..... Immigrant 1.		1
May..... St. Louis 1, Cincinnati 1, intra-State 1.		3
June..... St. Louis 3.		3
July..... None.		0
August..... St. Louis 1.		1
September..... Cincinnati 1.		1
October..... St. Louis 1.		1
November..... St. Louis 1.		1
December..... Unknown 1.		1

\* Keokuk 5, Bellevue, 1.

Resulting from the 306 separate introductions of the disease, there were 2,040 cases of small-pox reported, outside of Chicago, the professional data concerning which are thus summarized:

Total number of cases reported.....	2,040
— — — — recovered.....	1471
— — — — died.....	460
— — — — result not stated, or data otherwise imperfect.....	109
	2,040
Mortality rate in 1931 cases.....	23.8 per cent.

In the following percentages, referring to vaccination, only the 1931 cases of which sufficiently accurate data have been received, are dealt with:

Mortality percentage among vaccinated.....	6.1
— — vaccinated before exposure only.....	6.9
— — after exposure only.....	5.6
— — both before and after exposure.....	None
Mortality percentage among non-vaccinated.....	48.6
— — vaccination unsuccessful.....	44.4
— — — never attempted.....	50.7
Mortality percentage among miscellaneous*.....	35.7
Mortality percentage among males.....	25.1
— — — females.....	22.0

These various items are considered in detail and made the subject of explanatory and critical comment in the section entitled "Tables, Notes and Comments"—which see.

#### COST OF THE EPIDEMIC.

Concerning the economic features of the epidemic:—The actual cost—including items of expense defrayed out of the public funds, as well as those borne by private individuals—has been reported in over 38 per cent. of the total cases; but only 16 localities have returned statements of their constructive losses—including, under this heading, losses to common carriers by interruption of travel and traffic, and to business of all kinds, by panic, quarantine, etc. In estimating the actual cost of the cases for which this item has not been reported, the average cost per case of the 38 per cent. (788 cases), has been taken as the basis. In determining the probable constructive cost the average per diem cost per locality has been ascertained and used as the basis of computation. (The aggregate duration of the outbreaks in the 16 localities, constructive cost returned, was 648 days, and the average per diem cost was a little over \$230.) While this average will, undoubtedly, give a higher rate in some localities than the amount of loss actually sustained, in others it will give a lower rate—the number of localities returned, nearly nine per cent. and their character, being fairly representative of the whole.

Based on these data, and excluding the value of human life lost, time wasted, and a variety of speculative items often included in such estimates, the following figures are given as closely approximating the actual money cost of the epidemic of 1881-83 to the whole State:

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\*Inoculated, recurrent attacks, etc.

*In the State, exclusive of Chicago:*

Actual cost reported, (788 cases).....	\$108,688 09
Average actual cost per case.....	\$138 05
Constructive cost reported (16 localities—648 days).....	149,165 00
Average per diem constructive cost.....	\$230 00
Total actual cost, 2040 cases, at \$138 05 .....	281,622 00
Total constructive cost, 14,520 days, at \$230.....	3,339,600 00
Total cost of epidemic, State at large.....	\$3,621,222 00

*In Chicago:*

Actual cost, 2055 hospital cases, gratis vaccination, etc.....	\$75,120 90
Actual cost, 4573 cases treated at home, at \$119 44*.....	500,624 53
Constructive cost, 900 days, at \$230.....	+207,000 00
Total cost of epidemic, Chicago.....	782,746 43
Total cost of epidemic, January 1, 1881-December 31, 1883 .....	\$1,403,968 43

Dr. Benjamin Lee, in an elaborate paper, read before the American Public Health Association, November 11, 1875, figures up the cost of the small-pox epidemic in Philadelphia, 1870-71-72, at \$16,835,977. 9 (excluding his item "loss by death.") In that epidemic there were 20,065 cases, with 4.64 deaths—making an average cost per case of \$839.12, actual and constructive cost both included. On the same basis the 6588 cases in Chicago, covering a like period of time, would have cost \$5,528,122.66.

A word or two of comment may be permitted, before closing this summary, concerning these economic features of the epidemic.

Up to the middle of January, 1882, a few days before the date of the Secretary's letter to Dr. Stephen Smith, already quoted, there had been 126 outbreaks in the State at large, or about 10 per month, the average duration of which was 71.5 days each; subsequent to that date, and up to the last of December, 1883, there were 180 more outbreaks (7.6 per month), the average duration of which was 30.6 days each. Dividing on the same period, there were 1,235 cases, with 271 deaths, before January 15, 1882; and 805 cases, with 189 deaths, after that date—giving averages, per month, of 98.8 cases, with 21.7 deaths, and 34.2 cases, with 7.1 deaths, for the two periods, respectively.

Had the epidemic continued at the same averages after January 15, 1882, as obtained prior to that date, the aggregate would have been 3,557 cases, with 780 deaths, instead of 2,040 cases, with 460 deaths, as reported. There would have been 160 outbreaks, averaging 71.5 days each, making an aggregate of 25,740 days' duration; instead of 206 outbreaks, averaging 47.4 days each, and an aggregate of 14,520 days' duration.

A comparative statement of cost would present the following contrasts, dealing only with the State at large, and exclusive of Chicago:

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\* Estimated at 20 per cent. less than cost of cases treated in the State at large.

† This item is obviously much too low; but, in the absence of other data for an estimate, the per diem cost in the State at large is used, furnishing this result.

*For period before January 15, 1882—*

Total actual cost, 1,235 cases at \$138.05.....	\$170,491 75
Total constructive cost, 9,012 days at \$230.....	2,072,760 00
Total cost.....	\$2,243,251 75

*For period after January 15, 1882—*

Total actual cost, 805 cases at \$138.05.....	\$111,130 25
Total constructive cost, 5,508 days at \$230.....	1,266,840 00
Total cost.....	1,377,970 25

*For whole period, January 1, 1881—December 31, 1883—*

Total actual cost, 2,040 cases at \$138.05.....	\$281,622 00
Total constructive cost, 14,520 days at \$230.....	3,339,600 00
Total cost.....	3,621,222 00

*For whole period on averages up to January 15, 1882—*

Total actual cost, 3,557 cases at \$138.05.....	\$491,043 85
Total constructive cost, 25,740 days at \$230.....	5,920,200 00
Total cost.....	\$6,411,243 85

Net difference in favor of period after January 15, 1882.....\$2,790,021 85

It should be noted that this showing does not take into account the fact that, as vaccination and revaccination were more generally resorted to; as methods of dealing with an outbreak improved; as local authorities became more familiar with their duties and responsibilities; in short, as the agencies which the BOARD set in motion at its November, 1881, meeting, came to be felt throughout the State, panic, alarm, excitement, were less easily aroused; cases were promptly and more economically cared for; quarantines of exclusion were less frequently enforced; schools, churches, courts, and other public assemblages, were maintained, even though a case or two of small-pox existed in the community, where, in the earlier days, they would have been summarily closed; travel, traffic, and business generally, went on with little or no interruption; and the disease, from about the middle of January, 1882, lost significance as a dreaded epidemic.

That these results, and this constructive saving of 320 lives, 1,517 cases, and over two and three-quarter millions of dollars, were due solely to the efforts of the STATE BOARD OF HEALTH, it is not assumed to claim. It is something more, however, than a mere coincidence, that, within twenty days from the time when the efforts of the BOARD may be fairly supposed to have begun to act, there should have been the sudden and marked decline shown in the foregoing figures and tables. And, making all legitimate deduction for the operation of other causes in the production of this result, a sufficient margin of credit will still remain to satisfy the thoughtful investigator of the utility, the necessity, and the economy of a central, co-ordinating agency, with power to direct, ability to instruct, and means to supplement and assist the independent efforts of local authorities. These latter are usually adequate to cope with the ordinary sanitary problems. But to successfully resist or suppress an invasion of epidemic contagious or infectious disease, demands disciplined, organized, co-operative action, such as it has been found possible hitherto to secure only through a central State organization.



## TABLES, NOTES AND COMMENTS.

Of the total number of cases reported to the BOARD, the data of 1,931 were sufficiently full and trustworthy to warrant their use in the following tables. These have been framed mainly with the view of illustrating the question of vaccinal protection, and such illustration is presented in fuller detail, it is believed, at least in some phases, than ever before attempted. As examples, Table II, having reference to the period of vaccination in relation to exposure; Tables III and IV, analyzing the mortality in the general class "Unvaccinated"; and Table VI, dealing with vaccination in relation to puberty—may be cited in the following group.

The first table gives the general results for the entire period, 1881-1883; and the general results for each of the three groups, Vaccinated, Unvaccinated, and Miscellaneous.\*

TABLE I.—*Showing Actual Mortality and Mortality Per cent. of all Vaccinated—Unvaccinated—Miscellaneous.*

SEXES AND PERCENT- AGES.	ALL CASES.			VACCINATED.			UNVACCINATED. MISCELLANEOUS.					
	Total.	Rec'd.	Died..	Total.	Rec'd.	Died..	Total.	Rec'd.	Died..	Total.	Rec'd.	Died..
Males .....	1100	823	277	612	573	39	418	202	216	70	48	22
Percent.....		74+	26—		94—	6+		48+	52—		69—	31+
Females .....	831	648	183	469	443	26	292	163	129	70	42	28
Percent.....		78+	22—		94+	6—		56—	44+		60.	40
Totals .....	1931	1471	460	1081	1016	65	710	365	345	140	90	50
Percent.....		76+	24—		94—	6+		51+	49—		64+	36—

One anomalous feature of the epidemic should be noted in connection with this table: Contrary to the general experience in prolonged epidemics, the mortality rate increased, instead of diminishing, toward the close. In 1881, the mortality rate was 21.5 per cent. ;

\*For typographical convenience, the signs *plus* (+) and *minus* (—) are employed, instead of decimals, and have this signification: Where the decimal is greater than 50, the next higher whole number is used with the *minus* sign; where it is less than 50, the whole number only is used, followed by the *plus* sign. Thus, the percentage of total recoveries in the 1,931 cases is written 76+, instead of 76.17; and the percentage of total deaths is written 24—, instead of 23.82.

in 1882, it rose to 24.8 per cent., and, in 1883, to 25 per cent. This in the State at large. In Chicago the mortality followed the usual rule, being 39.37 per cent. in 1881 (43.42 per cent. among cases treated at home, and 31.7 per cent. among cases treated in hospital); in 1882 it fell to 35.77 per cent. (39.5 per cent. among cases treated at home, and 28 per cent. among hospital cases); and, in 1883, there was a further decline to 25.8 per cent. (28.4 per cent. among at home cases, and 20.9 per cent. among hospital cases.)

Three factors probably combine to reduce the mortality rate, in prolonged epidemics of contagious or infectious diseases, as the epidemic continues. First: The individuals most susceptible to the contagion are the first attacked among those exposed; and such hyper-susceptibles succumb in larger numbers than do those whose powers of general and special resistance are greater. Second: There would seem to be a diminution of virulence in the contagion produced by its passage through numbers of individuals. Jenner was convinced that this was true of the small-pox contagion; and although Pasteur and others have failed to demonstrate this by recent experiment, there is much in the history of epidemics of other diseases besides small-pox—notably, for example, in many yellow-fever epidemics—tending to confirm Jenner's views. It is possible, also, that the continued exposure of the less susceptible, who finally yield to an attack, begets in them a tolerance of the poison which modifies the severity of its effects. Third: As an epidemic progresses, both diagnosis and modes of treatment sensibly improve; and thus not only is the actual mortality rate diminished, but a very important element of error in computing the mortality rate is eliminated, to-wit: the failure to recognize and report mild or obscure cases of the disease. Such failures obtain the more extensively as the disease is of rare occurrence—whence arises want of familiarity with its diagnostic features; or, where advertisement of the disease is followed by unpleasant results, as in placarding the infected house, quarantining or isolating the compromised, removal of the infected to hospital, loss or interruption of business, etc. Both these causes combine to swell the apparent mortality rate in the early period of a small-pox epidemic; during which period it not unfrequently happens that the first notification of the existence of a case is the burial certificate.

The departure from this rule in the State at large during this epidemic, is found on examination to be more apparent than real. During the first year Chicago, and the territory immediately adjacent or in close communication therewith, furnished the greatest number of cases. While the disease continued, to a greater or less degree, in this original territory, it extended during the second year to the middle and southern portions of the State; and, during the third year, invaded areas still more remote from great lines of travel. So that, in reality, the disease can be said to have existed as a three years' epidemic only in Chicago; while in the State at large successive portions were invaded only for brief periods—the disease, as a rule, being promptly suppressed, notwithstanding its frequent introduction, wherever the rules and regulations of the STATE BOARD were adopted and enforced.

Under this view of the question, there still remains to be considered the fact of a successively-increasing mortality rate, in what may be regarded as three distinct epidemic periods and distinct epidemic areas in the State at large. This, however, is believed to be fully accounted for by the difference in the vaccinal status of the areas infected. In those traversed by the great trunk lines of travel, and in direct and constant communication with Chicago, St. Louis and other large cities, the evidence is conclusive that vaccination is much more uniformly resorted to, and that a higher degree of vaccinal protection is secured, than in the more remote and secluded regions.

The case, then, may be thus summed up: During the first year of the disease in the State at large, the population of the areas then infected was better protected against small-pox by general vaccination, and, consequently, exhibited a lower mortality rate, as compared with the population of the areas infected during the second year; and this latter compared more favorably in both respects, although not to so marked an extent, with the population in the areas infected during the third year—the mortality percentages being as before stated, 21.9, during the first year, 1881; 24.8, during the second year, 1882; and 25 during the third year, 1883.

TABLE II.—*Showing Recoveries and Deaths—with Percentages—among 1081 Successfully Vaccinated Cases, Analyzed with Reference to Date of Vaccination in Relation to Exposure.*

Sexes and Percentages.	Successfully vaccinated.			Before exposure only.			After exposure.			Both before and after exposure.		
	Tot'l	Rec.	Died.	Total	Rec.	Died.	Tot'l	Rec.	Died.	Tot'l	Rec.	Died.
Males.....	612	573	39	411	382	29	161	151	10	40	40	00
Percent.....		94—	6+		93—	7+		94—	6+		100.0	00.0
Females.....	469	443	26	279	261	18	162	154	8	28	28	00
Percent.....		94+	6—		93½	6½		95.0	5.0		100.0	00.0
Totals.....	1,081	1,016	65	690	643	47	323	305	18	64	68	00
Percent.....		94—	6+		93+	7—		94+	6—		100.0	00.0

NOTE.—Total "recovered, before exposure only," includes 41 males and 52 females, on whom revaccination after exposure is reported unsuccessful. Total "died, before exposure only," includes 5 males and 7 females, the same. Total "recovered, after exposure only," includes 1 male and 7 females, on whom revaccination before exposure is reported unsuccessful.

The absolute protective power of vaccination is strikingly shown in the above table. Only 63 cases of the disease, out of the total 1,911 cases tabulated, occurred among those who had been vaccinated, both before and after exposure, and all of these recovered. This protective power is also seen to bear a relation, in point of time, to the nearness of the vaccination to the date of attack. Of those vaccinated "before exposure only," 93.18 per cent. recovered; while of those vaccinated "after exposure only," 9.42 per cent. recovered. The obvious lesson of these figures is: *It is never too late to vaccinate.*

Compare this Table, also, with Table VI, giving the results in 624 adults, with data of vaccination in relation to the period of puberty.

TABLE III.—*Showing Recoveries and Deaths—with Percentages—among 710 Unvaccinated Cases—Subdivisions, "Vaccination never attempted," "Vaccination attempted, reported unsuccessful."*

Sexes & Percentages.	Unvaccinated.			Never attempted.			Attempted—reported unsuccessful.		
	Total.	Rec.	Died.	Total.	Rec.	Died.	Total.	Rec.	Died.
Males .....	418	202	216	288	135	153	130	67	63
Percent .....		48+	52—		47—	53+		51½	48½
Females .....	292	163	129	183	97	86	109	66	43
Percent .....		56—	44+		53 0	47.0		60½	39½
Totals .....	710	365	345	471	232	239	239	133	106
Percent .....		51+	49—		49+	51—		56—	44+

A new feature is brought out by this Table and by the analysis in the Table (IV) which follows, to-wit: That the operation of vaccination, even though reported unsuccessful, seems to exert a modifying influence upon a subsequent attack of small-pox, as compared with the results of such attack in those upon whom the operation had never been attempted. Nearly 51 per cent. of those "never attempted" died during the late epidemic, as against about 4½ per cent. of those on whom the operation had been performed with apparently unsuccessful results. It is probable that some element of error exists in these figures, arising from two sources: First, that cases reported "Vaccinated unsuccessful" may include some who erroneously claim to have been vaccinated, but of whose attempted vaccination there is no other proof; second, that they may include others in whom, proof of the operation being conclusive, the results were masked by the phenomena of the variolous disease. This latter class would be among those only in whom the operation was performed after exposure, and an examination of the figures given in the analysis, where it is seen that over 57 per cent. of those vaccinated unsuccessfully after exposure recovered, lends color to the criticism. But even making liberal allowance for error likely to arise from these sources, there still remains a marked discrepancy between the two classes in favor of those upon whom the operation was at least attempted—a discrepancy still further heightened in the class "Unsuccessfully vaccinated both before and after exposure."



TABLE IV.—*Analysis of 239 Cases, reported Unsuccessfully Vaccinated, with Reference to Date of Attempted Vaccination in Relation to Exposure.*

Sexes and Percent-ages.	Reported un-successful.			Before exposure only.			After exposure only.			Both before and after exposure.		
	Total...	Recov'd	Died...	Total...	Recov'd	Died...	Total...	Recov'd	Died...	Total...	Recov'd	Died...
Males .....	130	67	63	52	27	25	64	32	32	12	7	5
Percent .....		51½	48½		52—	48+		50	50		58+	42—
Females .....	109	66	43	28	15	13	76	47	29	7	5	2
Percent .....		60½	39½		53½	46½		62—	38+		71+	29—
Totals .....	239	133	106	80	42	38	140	79	61	19	12	7
Percent .....		56—	44+		52½	47½		56+	44—		63+	37—

NOTES.—Total "recovered, before exposure only," is exclusive of 1 male and 7 females successfully vaccinated after exposure. Total "recovered, after exposure only," is exclusive of 41 males and 52 females successfully vaccinated before exposure. Total "died, after exposure only," is exclusive of 5 males and 7 females the same.

Of those vaccinated only after exposure (140), and both before and after exposure (19—total, 159), 91 recovered, being in the ratio of 57.2 percent. of recoveries.

Table V calls for no special comment, except to note that a previous attack of small-pox is by no means a safeguard against a fatal result, should the individual be subsequently attacked—nearly 30 per cent. of such cases proving fatal.

TABLE V.—*Showing Results in 140 Miscellaneous Cases, Recurrent Attacks, Inoculated, Etc.*

Sexes and Percent-ages.	Miscellaneous.			Recurrent at-tacks.			Inoculated.			Imperfect data.		
	Total...	Rec'd...	Died...	Total...	Rec'd...	Died...	Total...	Rec'd...	Died...	Total...	Rec'd...	Died...
Males .....	70	48	22	13	9	4	12	12	0.	45	27	18
Percent .....		69—	31+		69+	31—		100.	00.		60.	40.
Females .....	70	42	28	4	3	1	10	9	1	56	30	26
Percent .....		60.	40.		75.	25.		90.	10.		53½	46½
Totals .....	140	90	50	17	12	5	22	21	1	101	57	44
Percent .....		64+	36—		70½	29½		95+	5—		57+	43—

NOTES.—Recurrent attacks: 1 female (No. 870) and 1 male (No. 870) each had three attacks; both successfully vaccinated.—1 male (No. 679) had two attacks; variola ran their course synchronously in first attack.—1 male (No. 1046) had an attack of small-pox when 6 years old, the second attack 64 years after. See also Nos. 57, 404, 412, 528, 854 and 906.

Inoculated: 2 females (Nos. 907 and 919) claimed to have been inoculated; no other evidence; died of confluent small-pox on the eighteenth day, and of hemorrhagic small-pox on the sixteenth day, respectively.—1 male (No. 948) and 1 female (No. 949) successfully vaccinated after exposure.

Numbers refer to *Tabular Statement of 1100 Cases*, which see.

That the constitutional changes which occur about the period of puberty exert a modifying influence upon the protective power of vaccination, is unmistakably proven by the following figures. Only

56 cases of small-pox out of 1,931, occurred among those vaccinated both before and after puberty, and all these recovered. More than 96 per cent. of those vaccinated "after puberty only" recovered; but the mortality among those vaccinated "before puberty only" rose to 10.81 per cent., being largely in excess of the mortality among all vaccinated, which was 6.11 percent. Then, too, it should be noted that a far larger number of cases occur among those vaccinated "before puberty only," as compared with those vaccinated only after, and those vaccinated both before and after puberty—the relative proportions being 66.66 in the first class, 24.35 in the second, and 8.99 in the third class.

TABLE VI.—*Vaccination in Relation to Puberty; Results in 624 Cases Among Adults.*

Sexes and Percent-ages.	VACCINATED (ADULTS ONLY.)											
	All cases.			Before puberty only.			After puberty only.			Both before and after puberty.		
	Total...	Rec'd...	Died...	Total...	Rec'd...	Died...	Total...	Rec'd...	Died...	Total...	Rec'd...	Died...
	Total...	Rec'd...	Died...	Total...	Rec'd...	Died...	Total...	Rec'd...	Died...	Total...	Rec'd...	Died...
Males .....	370	337	33	258	230	28	82	77	5	30	30	0
Percent .....		91+	9—		89+	11—		94—	6+		100.	00
Females .....	254	230	24	158	141	17	70	69	1	26	26	0
Percent .....		90½	9½		89+	11—		98½	1½		100	00
Totals .....	624	567	57	416	371	45	152	146	6	56	56	0
Percent .....		91—	9+		89+	11—		96+	4—		100.	00

The effect of the vaccination requirement for public schools upon the susceptibility to small-pox of all living at given ages forms the subject of the three following tables. The school-age in Illinois is, nominally, from 6 to 21, but, practically, ends at about 17 years, considerably less than three per cent. of all in attendance being over this age. This fact dictated the divisions "under 6 years" and "6-17 years;" it being thus possible to determine the relative proportions of cases and of deaths at given ages, with relation to the agency of the School-Vaccination Order in producing such proportions. Table VII shows the actual number of cases, grouped, by sexes, in twelve periods, these periods embracing, first, all under 6 years of age; second, those between 6 and 17 years; and the remainder, substantially, those in each decade from 20 years upwards, two supplemental periods being also given, namely, from 15 to 20, and from 17 to 30 years.

TABLE VII.—*Showing the Total Number of Cases of Small-pox at Given Ages—Sexes specified.*

Sexes.	Totals.....	1	2		3		4	5	6	7	8	9	10	Not stated.
		Under 6 years	6-17 years.	15-20 years.	17-30 years.	20-30 years.	30-40 years.	40-50 years.	50-60 years.	60-70 years.	70-80 years.	Over 80 years.		
Males .....	1087	134	239	116	314	252	186	116	67	15	5	1	10	
Females .....	844	161	227	82	179	107	117	72	33	23	10	0	22	
Totals.....	1931	295	466	198	493	359	303	188	100	38	15	1	32	

NOTE.—The ten numbered columns give the totals; the figures in the supplemental columns "15-20 years" and "20-30 years" being embraced in No. 2, "6-17 years," and in No. 3, "17-30 years."

In Table VIII, the mean of the total population living at all ages, during the three years under consideration, has been computed from the population in 1880, given in the Tenth Census, and the population in 1882, ascertained by the school census of that year. The proportion (per cent.) of those living at given ages to the total population is given in the second column of this table; in the third is given the proportion (per cent.) of cases of small-pox occurring at these ages to the total number of cases at all ages; and upon these is based the relative susceptibility of the total population to small-pox at each of the specified groups of ages. Thus, out of every 100 cases of small-pox reported during the epidemic, 15.7 were among children under 6 years of age. But these formed only 16.1 per cent. of the total population. Therefore, the relative susceptibility of all children under 6 years of age is as 19 to 100 of the total population.

TABLE VIII.

Ages.	Proportion of given ages to total population. Per cent.	Proportion of cases of small-pox at given ages to whole no. of cases. Per cent.	Relative susceptibility to small-pox at given ages.
Under 6 years.....	16.1	15.7	As 19 is to 100
6-17 years .....	28.0	24.7	As 17 is to 100
17-30 years.....	25.0	26.1	As 20 is to 100
30-40 years.....	12.4	16.0	As 25 is to 100
Over 40 years .....	18.5	17.5	As 19 is to 100

The above figures show that, of the total population, those living during the school-age, 6-17 years, are least susceptible to small-pox; while the susceptibility decidedly increases beyond that age up to 40 years, after which it again declines to the degree found to obtain among children under 6. There can be no question that this least susceptibility during the recent epidemic was due to the enforcement of the School-Vaccination Order, by which, substantially, the entire school-population, in attendance after January 1, 1882, was vaccinated or revaccinated.

Table IX brings this fact out still more strikingly:

TABLE IX.

Ages.	Proportion of given ages to total popula- tion—per cent.	Mortality from small-pox at given ages— per cent.	Relative susceptibility to fatal small-pox at given ages.
Under 6 years.....	16.1	21.5	As 25 is to 100.
6-17 years.....	28.0	18.7	As 13 is to 100.
17-30 years.....	25.0	28.6	As 22 is to 100.
30-40 years.....	12.4	15.1	As 23 is to 100.
Over 40 years.....	18.5	16.1	As 17 is to 100.

In this Table the same method is pursued as in Table VIII, substituting fatal cases, for all cases of small-pox. Here it is seen that while the relative susceptibility of children under 6 to fatal small-pox, is as 25 to 100 of the whole population, it is only as 13 to 100 among the youth of the school-ages. That this increased immunity was solely due to recent vaccination and revaccination is again proven by the proportions of fatal susceptibility, which obtain in the groups following—22, 23 and 17 respectively.

These two Tables are most instructive, clearly emphasizing, as they do, the necessity not only of vaccination in infancy or childhood, but of its repetition after adolescence.

They suggest another apothegm, which may fitly take precedence of that based upon Table II, to-wit: *It is never too soon to vaccinate.*

The remaining tables do not seem to call for any special comment, except to remark that Table X furnishes cumulative evidence of the protective and modifying influence of vaccination—the shortest duration of the disease, as well as the least mortality, being found among the vaccinated.

## X.—DURATION OF DISEASE.

### 1.—In Relation to Character of Attack—1,390 Cases.

Result.	Totals.		Av. no. days	Discrete.			Confluent.			Hemorrhagic.		
	Cases.	Days.		Cases.	Days.	Av'ge days.	Cases.	Days.	Av'ge days.	Cases.	Days.	Av'ge days.
Recovered .....	1,007	23,076	22.9	772	15,203	19.6	228	7,551	33+	7	322	46
Died .....	383	4,458	11.6	26	304	11.6	268	3,167	11.8	89	987	11+
Totals.....	1,390	27,534	.....	798	15,507	.....	496	10,718	.....	96	1,309	.....
Averages.....	.....	.....	19.8	.....	.....	19.4	.....	.....	21.6	.....	.....	10.3



2.—*In Relation to Vaccinal Status—1162 Cases.*

Results.	Totals.		Vaccinated.		Non-vaccinated.		Vaccinated.					
							Before exp. only.		After exp. only.		Both before and after exposure.	
	Cases	Days.	Cases	Days.	Cases	Days.	Cases	Days	Cases	Days.	Cases	Days.
Recovered .....	845	17,596	618	10,824	227	6,772	376	6,090	196	4,096	46	638
Average duration..		20.8		17.5		29.8		16.2		20.9		13.8
Died .....	317	3,660	52	544	265	3,116	39	424	13	121	00	00.0
Average duration..		11.5		10.4		11.7		10.7		9.3		13.8
Totals.....	1,162	21,256	670	11,368	492	9,888	415	6,514	209	4,217	46	638
General averages..		18.3		16.9		20+		15.7		20.1		13.8

3.—*Average Duration of Disease (in Days).*

Result.	In all cases*	Vaccinal status.					Character of attack.		
		Vaccinated.....	Non-vaccinated.	Vaccinated—			Discrete .....	Confluent .....	Hemorrhagic .....
				Before exposure only	After exposure only	Before and after exposure.			
Recovered .....	21.9	17.5	29.8	16.2	20.9	13.8	19.6	33+	46.
Died .....	11.6	10.4	11.7	10.7	9.3	0.	11.6	11.8	11+
General averages .....	19.1	16.9	20+	15.7	20.1	13.8	19.4	22.6	10.3

\* Aggregate of both the preceding groups.

TABLE XI—*Nationalities of Cases.*

United States.....	1,386	Poland.....	14
Germany.....	210	Scotland.....	9
Ireland.....	76	Switzerland.....	3
England.....	67	Wales.....	3
Sweden.....	42	Bohemia.....	2
Canada.....	21	Belgium.....	1
Norway.....	17	France.....	1
Denmark.....	15	Novia Scotia.....	1
Holland.....	14	Unknown.....	49
Total.....			1,931

TABLE XII—*Occupations.*

Housewife.....	322	Stone worker.....	10
Laborer.....	193	Merchant.....	7
Farmer.....	188	Prostitute.....	7
Public scholar.....	146	Minister.....	5
Domestic.....	57	Physician.....	5
River service*.....	47	Medical student.....	4
Railway service.....	42	Bricklayer.....	4
Mechanic†.....	40	Barber, bartender, bootblack, butcher, capitalist, nurse, peddler, printer, stockman—3 each.....	27
Private scholar.....	30	Druggist, errand-boy, news-boy, untaker—2 each.....	8
Iron worker‡.....	26	Brewer, drayman, hostler, market-master, miller, musician, nun, sexton—1 each.....	8
Carpenter.....	26	No occupation reported.....	637
Clerk.....	24		
Tramp.....	17		
Miner.....	15		
Laundress.....	14		
Teacher.....	12		
Seamstress.....	10		
Total.....			1,931

\* Includes 3 sailors, 1 canal driver.

† Includes 9 painters.

‡ Includes blacksmiths, machinists, moulders, puddlers, etc.

**TABULAR STATEMENT of Localities Infected—Origin of Contagion, Duration, Number of Cases, Number of Deaths, Actual Cost to Individuals and Communities, Constructive and Estimated Cost in each Locality reported.**

NOTE.—Under the heading "Cost," subjoined, are included only the expenses defrayed out of the public funds for hospital maintenance, etc., and the cost to private individuals. Constructive losses to business, etc., are given in footnotes, where such losses have been reported.

The italic letter *a*, following the names of localities, indicates that the figures of cost, herein given, are those furnished by correspondents of the Board from the respective localities. In all other cases the figures are estimated on the basis of the average cost per case (\$138.05,) of the 38 per cent. of cases in which this item has been reported.

Localities.	Origin.	Duration.	Number of cases...	Number of deaths.	Cost.
Adams county—					
Clayton .....	St. Louis .....	December 8, 1881, December 31, 1881.			
Clayton .....	Keokuk, Ia. ....	December 18, 1881, January 1, 1882.	2	1	\$276 10
Richfield, <i>a</i> .....	Keokuk, Ia. ....	January 2, 1882, February 9, 1882.	16	6	3,160 00
Quincy, <i>a</i> .....	Infected rags .....	March 18, 1882, May 29, 1882.	22	3	3,857 00
Alexander county—					
Cairo .....	River travel .....	January 1, 1882, January, 1883.	126	26	14,633 30
*Commercial Point, <i>a</i> .....	Cairo .....	May, 1882, July 16, 1882.	23	7	1,700 00
Boone county—					
Leroy Tp. ....	Chicago .....	January 12, 1882, January, 1882.	1	0	138 05
Brown county—					
Cooperstown ..	Not stated .....	February, 1881, February, 1881.	7	0	966 35
Ripley .....	Not stated .....	April, 1881, May, 1881.	1	0	138 05
Carroll county—					
Lunark, <i>a</i> .....	Chicago .....	December 22, 1881, January 9, 1882.	4	1	468 00
Cass county—					
†Beardstown, <i>a</i> .....	Railway travel .....	March 1, 1881, April 15, 1881.	32	16	6,473 43
Champaign county—					
Champaign .....	Not stated .....	July, 1881, August, 1881.			
Philo, <i>a</i> .....	Chicago .....	February 3, 1882, February 20, 1882.	7	1	966 35
Penfield .....	Chicago .....	January 15, 1882, February 23, 1882.	6	0	238 25
Thomasboro .....	Not stated .....	January 18, 1882, February 4, 1882.	1	0	138 05
St. Joseph, <i>a</i> .....	Not stated .....	February 1, 1882, March 3, 1882.	2	0	276 10
St. Joseph, <i>a</i> .....	Railway travel .....	March 5, 1882, April 5, 1882.	1	0	165 00
Christian county—					
Assumption, <i>a</i> .....	Tramps .....	February 4, 1882, March 2, 1882.	2	0	183 00
Edinburg, <i>a</i> .....	Chicago .....	April 3, 1882, April 20, 1882.	2	0	178 00
Taylorville .....	Not stated .....	April 20, 1882, December 8, 1882, December 25, 1882.	2	0	178 00
			1	0	138 05

\* Constructive and estimated losses at Commercial Point, reported, \$1,600.

† Constructive and estimated losses at Beardstown reported, \$14,000.

*Tabular Statement of Localities Infected—Continued.*

Localities.	Origin.	Duration.	Number of cases...	Number of deaths.	Cost.
Clark county— Marshall, <i>a</i> .....	Cincinnati .....	September, 1882, October, 1882.	4	0	\$261 00
Clinton county— Irishtown, <i>a</i> .....	Arkansas.....	February 20, 1882, February 26, 1882.	1	1	98 75
Aviston, <i>a</i> .....	St. Louis .....	June 16, 1883, August, 1883.	3	0	662 00
Trenton .....	St. Louis .....	February, 1883, March, 1883.	2	0	276 10
Coles county— Mattoon, <i>a</i> .....	St. Louis .....	June 3, 1882, July 11, 1882.	5	4	347 20
Oakland .....	Cincinnati .....	September, 1883, November, 1883.	5	2	690 25
Cook county— Chicago.....	Immigrants, 1879-80.....	January, 1881, 1883.	6816	2518	940,948 80
Bartlett.....	Immigrants.....	January 15, 1881, February 24, 1881.	3	1	414 15
Evanston Tp.....	Chicago .....	December, 1880, July, 1881.	15	2	2,070 75
New Trier Tp.....	Chicago.....	January, 1881, 1881.	9	1	1,242 45
Niles Tp.....	Chicago.....	March, 1881, April, 1881.	3	1	414 15
*Lemont Tp., <i>a</i> .....	Chicago.....	August, 1881, May 23, 1882.	36	8	2,363 47
Norwood Park.....	Chicago .....	August, 1881, October, 1881.	13	1	1,794 65
Lake Tp.....	Chicago .....	November 2, 1881, May 30, 1882.	69	16	9,525 45
Hyde Park Tp., <i>a</i> .....	Chicago .....	December 15, 1881, June 30, 1882.	63	20	7,352 37
Lake View Tp.....	Chicago .....	November, 1881, March, 1882.	96	34	13,666 95
Cicero Tp.....	Chicago .....	December, 1881, January, 1882.	3	0	414 15
Schaumburg Tp.....	Chicago .....	January, 1882, February, 1882.	1	0	138 05
Barrington .....	Chicago .....	January, 1882, February, 1882.	2	1	276 10
Jefferson Tp.....	Chicago .....	January, 1882, February, 1882.	16	†	2,206 80
Elk Grove.....	Chicago .....	January, 1882, February, 1882.	1	0	138 05
Palatine, <i>a</i> .....	Chicago .....	February, 1882, March, 1882.	5	1	540 00
Palos.....	Not stated.....	February, 1882, February, 1882.	1	1	138 05
Crawford county— Robinson .....	Cincinnati.....	May 15, 1883, July 17, 1883.	10	3	1,380 50
Cumberland county— Union Tp., <i>a</i> .....	Chicago .....	March 1, 1882, April 16, 1882.	1	0	540 00
Crooked Creek Tp.....	Chicago .....	March 8, 1882, April, 1882.	1	1	138 05
DeKalb county— DeKalb.....	New Orleans.....	November, 1881, December, 1881.			
DeKalb.....	Unknown.....	April, 1882, May, 1882.	15	2	2,070 75
Sycamore.....	Chicago .....	December, 1881, January, 1882.	1	0	138 05
DeWitt county— Harp Tp.....	Indiana .....	January 13, 1882, February 6, 1882.	1	0	138 05
Clinton, <i>a</i> .....	Not stated.....	January 17, 1882, February, 1882.	2	0	370 00

\*Constructive and estimated losses in Lemont township, reported, \$10,320.

†In four cases result not stated.



*Tabular Statement of Localities Infected—Continued.*

Localities.	Origin.	Duration.	Number of cases.	Number of deaths.	Cost.
DuPage county—					
Milton Tp., <i>a</i> .....	Chicago .....	November, 1881, January, 1882.	7	3	259 25
Hinsdale, <i>a</i> .....	Chicago .....	December 1, 1881, December 9, 1881.	1	1	165 00
Bloomington.....	Chicago .....	January 2, 1882, March 3, 1882.	6	1	823 30
Elmhurst .....	Chicago .....	February, 1882, March, 1882.	1	0	138 05
*Wheaton, <i>a</i> .....	Chicago .....	February 12, 1882, March 1, 1882.	1	0	484 00
Lombard.....	Chicago .....	February, 1882, March 14, 1882.	7	2	966 35
Edgar county—					
Paris .....	Immigrant.....	March 1, 1882, April, 1882.	1	0	138 05
Fayette county—					
Farina .....	St. Louis.....	November 25, 1883, December, 1883.	2	0	276 10
Ford county—					
†Gibson City, <i>a</i> .....	Chicago .....	April, 1882, May, 1882.	3	0	937 00
Paxton.....	Ocean steamer.....	August 25, 1882, September 20, 1882.	4	1	552 20
Fulton county—					
†Cuba, <i>a</i> .....	Burlington, Ia.....	January, 1881, March, 1881.	55	11	7,000 00
Gallatin county—					
Omaha, <i>a</i> .....	Not stated.....	January, 1882, February, 1882.	1	0	240 00
Greene county—					
§Carrollton, <i>a</i> .....	Missouri.....	February 17, 1882, April 13, 1882.	2	1	1,150 00
Greenfield .....	Wyoming T.....	March 29, 1883, April 14, 1883.	1	0	138 05
Grundy county—					
Minooka .....	Chicago .....	April 16, 1882, April, 1882.	1	0	138 05
Vienna Tp.....	Immigrant.....	February 23, 1883, April, 1883.	16	5	2,208 80
Hamilton county—					
Piopolis.....	Wisconsin .....	February 1, 1883, May 10, 1883.	30	5	1,485 00
McLeansboro .....	Unknown.....	December 1, 1883, December 31, 1883.	6	2	828 40
Hancock county—					
Sonora Tp.....	Keokuk, Ia.....	January 10, 1882, February, 1882.	6	0	828 30
Plymouth, <i>a</i> .....	Nebraska.....	January 28, 1883, April 30, 1883.	30	2	1,420 00
Henderson county—					
South Henderson.....	Keokuk, Ia.....	December, 1881, January, 1882.	1	1	138 05
Henry county—					
Annawan, <i>a</i> .....	Moline.....	January 22, 1882, February 14, 1882.			
Annawan .....	Railway travel.....	March, 1882, April, 1882.	3	2	388 28
¶Orion, <i>a</i> .....	Rock Island.....	January 5, 1882, February, 1882.	1	1	128 00
Geneseo .....	Chicago .....	February, 1882, March, 1882.			
Geneseo .....	Railway travel.....	May, 1882, June, 1882.	4	2	552 20
Cambridge.....	Railway travel.....	November, 1882, January, 1883.	17	1	2,355 85

\*Constructive and estimated losses at Wheaton, reported, \$10,800.

†Constructive and estimated losses at Gibson City, reported, \$2,750.

‡Constructive and estimated losses at Cuba, reported, \$10,000.

§Constructive and estimated losses at Carrollton, reported, \$2,800.

¶Constructive and estimated losses at Orion, reported, \$500.

*Tabular Statement of Localities Infected—Continued.*

Localities.	Origin.	Duration.	Number of cases.	Number of deaths.	Cost.
Iroquois county—					
Woodland, a.....	Chicago .....	December, 1881, January, 1882.	10	3	814 70
Watseka .....	Woodland .....	December, 1881, January, 1882.	5	0	690 25
Martinton Tp.....	Not stated.....	January, 1882, January 19, 1882.	1	1	138 05
*Danforth, a.....	Chicago .....	February 1, 1882, March 7, 1882.	13	2	1,016 80
Jackson county—					
Grand Tower, a.....	St. Louis .....	May 20, 1882, July 20, 1882.	6	2	485 10
Makanda .....	New Orleans.....	March 9, 1883, April 5, 1883.	2	1	160 00
Jersey county—					
Elsah .....	St. Louis .....	December, 1881, January, 1882.	15	2	2,070 75
Elsah .....	St. Louis .....	August, 1882, September, 1882.	11	3	1,518 55
Jerseyville.....	St. Louis .....	January 5, 1882, August, 1882.			
JoDavies county—					
Galena, a.....	Bellevue, Ia. ....	December, 1881, May, 1882.	14	3	1,470 19
Guilford Tp.....	Galena .....	December 1, 1881, April 25, 1882.	9	2	330 00
Vinegar Hill.....	Not stated.....	March, 1882, April, 1882.	3	0	414 15
Menominee.....	Galena .....	April, 1882, June, 1882.	4	0	552 20
Kane county—					
†Aurora, a.....	Chicago .....	September, 1881, October, 1881.			
Aurora .....	Chicago .....	February, 1882, April, 1882.			
Aurora .....	Chicago .....	October, 1882, November, 1882.	11	2	4,220 00
Elgin, a.....	†Chicago .....	October, 1881, July, 1882.			
Elgin .....	Michigan.....	January, 1882, January 19, 1882.			
Elgin .....	Immigrant.....	June, 1882, July, 1882.	28	7	2,970 50
Dundee .....	Chicago .....	March, 1882, October, 1882.	4	1	552 20
Kankakee county—					
Kankakee, a.....	Immigrant.....	May, 1881, June, 1881.	6	2	570 50
Reddick .....	Tramp .....	December, 1881, March 5, 1882.	10	0	1,380 50
Kendall county—					
Millbrook .....	Chicago .....	December, 1881, January, 1882.	4	1	552 20
Bristol .....	Pullman.....	January, 1882, January, 1882.	1	0	138 05
Plano .....	Unknown .....	February, 1883, February, 1883.	1	1	138 05
Knox county—					
Galesburg .....	Chicago .....	May, 1881, June, 1881.			
Galesburg .....	Creston, Ia.....	June 17, 1881, July, 1881.	4	1	552 20
Lake county—					
Waukegan.....	Chicago .....	December 15, 1881, February 23, 1882.	25	5	3,451 25
Cuba .....	Chicago .....	January, 1881, January, 1882.	1	0	138 05

\*Constructive and estimated losses at Danforth, reported, \$3,000.

†Constructive and estimated losses at Aurora, reported, \$10,000.

‡Seven introductions.

*Tabular Statement of Localities Infected—Continued.*

Localities.	Origin.	Duration.	Number of cases.	Number of deaths.	Cost.
LaSalle county—					
Norway Tp.....	Chicago.....	November, 1881, December, 1881.	5	2	690 25
Serena, a.....	Immigrant.....	January, 1882.	1	1	311 00
Northville.....	Immigrant.....	January 17, 1882, February, 1882.	1	0	138 05
Mendota.....	Chicago.....	January, 1882.	1	0	138 05
Deer Park Tp.....	Oglesby.....	January, 1882.	5	1	690 25
Oglesby.....	Tramp.....	March, 1882, February 13, 1882.	8	1	1,104 40
*Streator a.....	Immigrant.....	October, 1882, March 19, 1882.	24	5	5,814 75
Streator.....	Chicago.....	April, 1882, March 28, 1883.			
Ottawa.....	Immigrant.....	June, 1883, March 17, 1882.	2	0	276 10
Ottawa.....	Iowa City.....	April, 1882.			
Peru a.....	Immigrant.....	April, 15, 1882, May, 1882.			
		June, 1, 1882, June, 20, 1882.	3	2	609 00
Lawrence county—					
Bird Station.....	Chicago.....	January, 10, 1882, February 21, 1882.	6	1	828 30
Livingston county—					
Chatsworth a.....	Chicago.....	February 14, 1881, May 20, 1881.	14	3	1,425 00
Ocoya a.....	Railway travel.....	January, 1882, April, 20, 1882.	5	2	563 50
Dwight.....	Unknown.....	January, 1882.	5	3	690 25
Sannemin Tp., a.....	Not stated.....	January 5, 1882, February, 1882.	4	0	135 00
Round Grove Tp.....	Tramp.....	January, 1882.	3	0	414 20
Nevada Tp. a.....	Immigrant.....	February, 1882, April 14, 1882.	3	2	538 00
Pontiac a.....	Chicago.....	May, 1882, January 29, 1883.	1	1	295 25
Logan county—					
*East Lincoln Tp., a.....	Unknown.....	February, 1883, October, 1881.	42	8	10,000 00
Burtonview.....	Immigrant.....	December, 1881, April 11, 1882.	2	0	276 10
McDonough county—					
*Colchester a.....	Keokuk, Ia.....	May, 1882, December 24, 1881.	32	4	2,066 80
McHenry county—					
McHenry a.....	Chicago.....	March 17, 1882, January, 1882.	3	0	263 00
Chemung Tp.....	Chicago.....	March, 1882, April, 1882.	10	3	1,380 50
Grafton.....	Chicago.....	June, 1882, November, 1881.	1	1	138 05
McLean county—					
Money Creek Tp., a.....	Unknown.....	November, 1881, March 5, 1881.	19	4	1,185 00
Ireland's Grove.....	Railway travel.....	April 11, 1881, March, 1881.	1	0	138 05
Towanda.....	Pittsburg, Pa.....	April, 1881, January 1, 1882.	4	1	355 00
Leroy.....	Tramp.....	February, 1882, January 3, 1883.	1	0	138 05
McLean.....	Tramp.....	February, 1882, January, 1882.	2	0	276 10
Shirley.....	Tramp.....	February, 1882, January, 1882.	1	0	138 05

\*Constructive and estimated losses at Streator, reported, \$20,000.

†Constructive and estimated losses at East Lincoln, reported, \$20,000.

‡Constructive and estimated losses at Colchester, reported, \$12,130.

*Tabular Statement of Localities Infected—Continued.*

Localities.	Origin.	Duration.	Number of cases.	Number of cases.	Cost.
McLean county—					
Lacey.....	Not stated.....	January 25, 1882, February, 1882.	1	0	138 05
Bloomington.....	Chicago.....	January, 1882, February, 1882.			
Bloomington.....	Tramp.....	February, 1882, March, 1882.			
Bloomington.....	Immigrant.....	April 23, 1883, May, 1883.	5	0	714 25
Cropsey.....	Chicago.....	February 8, 1882, May 1, 1882.	8	0	1,104 40
Anchor a.....	Cropsey.....	March, 1882, April, 1882.	4	0	426 00
Chenoa.....	Not stated.....	March, 1882, April, 1882.	5	2	690 25
Mount Hope Tp.....	Immigrant.....	April 27, 1882, May, 1882.	1	0	138 05
Macon county—					
Decatur a.....	Railway service.....	May, 1881, June, 1881.			
Decatur.....	Railway service.....	September, 1881, September, 1881.			
Decatur.....	Elgin.....	March, 1882, April, 1882.			
Decatur.....	Railway service.....	April, 1882, May, 1882.	9	0	3,375 00
Macon.....	Tramp.....	February, 1882, May, 1882.	*48	12	6,626 40
Macoupin county—					
Honey Point Tp.....	Litchfield.....	January, 1882, March, 1882.	4	0	552 20
Madison county—					
Godfrey.....	Not stated.....	December, 1881, January, 1882.	4	0	552 22
Nameoki Tp.....	St. Louis.....	March, 1882, April, 1882.	3	0	230 00
Alton.....	Cincinnati.....	May, 1882, May, 1882.			
Alton.....	St. Louis.....	December, 1883, December, 1883.	8	3	1,104 40
Highland.....	St. Louis.....	June 4, 1883, July, 1883.	1	0	138 05
Marion county—					
Odin, a.....	Logan county.....	November, 1881, January, 1882.	6	1	160 00
Mason county—					
Topeka.....	Immigrant.....	June, 1881, July, 1881.	13	0	1,794 65
Havana.....	Chicago.....	February, 1882, March 1, 1882.	1	0	138 05
Massac county—					
Pellonia.....	Pudueah, Ky.....	March 7, 1883, April 20, 1883.	2	2	276 10
Menard county—					
*Athens, a.....	Kentucky.....	January 9, 1882, February, 1882.	5	0	435 00
Mercer county—					
Swedona.....	Keokuk, Ia.....	December 20, 1881, February 15, 1882.	12	2	1,656 60
New Windsor.....	Keokuk, Ia.....	January, 1882, January, 1882.	1	1	138 05
Cable.....	+Keokuk, Ia.....	January, 1882, March, 1882.	17	3	2,355 85

\*Including resulting cases in vicinity and in Shelby county.

\*Constructive and estimated losses at Athens, reported, \$5,300.

+Via Swedona.



*Tabular Statement of Localities Infected—Continued.*

Localities.	Origin.	Duration.	Number of cases.	Number of deaths.	Cost.
Monroe county—					
Renault .....	St. Louis .....	December 3, 1881, March, 1882.	20	4	2,761 00
Bluff Precinct, a .....	Renault .....	January, 1882, February, 1882.	5	1	906 00
Staton's Island .....	Springfield, Mo. ....	July, 1882, September, 1882.	13	1	1,794 65
Montgomery county—					
Litchfield, a .....	Immigrant .....	December 15, 1881, January, 1882.			
Litchfield .....	Railway service .....	June, 1882, July, 1882.			
Litchfield .....	Railway travel .....	January, 1882, February, 1882.			
Litchfield .....	Kentucky .....	January 23, 1883, March, 1883.	58	16	5,920 00
Morgan county—					
Jacksonville .....	Tramp .....	June, 1882, June, 1882.	1	0	138 05
Murrayville .....	Chicago .....	December 1, 1882, January, 1882.	1	0	138 05
Ogle county—					
Taylor Tp., a .....	Canada .....	January, 1882, February, 1882.	3	0	390 00
Byron .....	Not stated .....	May, 1882, June, 1882.	1	0	138 05
Kings .....	Not stated .....	November, 1882, November 18, 1882.	1	1	138 05
Peoria county—					
Peoria .....	Keokuk, Ia. ....	December 25, 1882, January, 1882.			
Peoria .....	Chicago .....	January 8, 1882, February, 1882.			
Peoria .....	Unknown .....	April, 1882, May, 1882.	4	0	552 20
Platt county—					
Cerro Gordo .....	Railway travel .....	December, 1881, February, 1882.	18	1	2,484 90
Willow Branch Tp. ....	Peddler .....	January 5, 1883, January 31, 1883.	1	0	138 05
Pike county—					
Griggsville Tp. ....	Cuba, Fulton county .....	February, 1881, April 15, 1881.	24	4	3,313 20
New Salem Tp. ....	Cuba, Fulton county .....	March 7, 1881, April 18, 1881.	7	1	966 35
Kinderhook Tp. ....	Immigrant .....	May 20, 1881, July, 1881.	37	9	5,107 85
Spring Creek Tp., a .....	Jerseyville .....	January, 1882, March, 1882.	6	2	1,025 00
Pulaski county—					
Mound City .....	River travel .....	June, 1882, September, 1882.	6	0	828 30
Mounds Junction .....	Cairo .....	May 17, 1883, July, 1883.	16	3	2,208 80
Randolph county—					
Prairie du Rocher .....	Staton's Island .....	August, 1882, October, 1882.	20	6	2,761 00
Chester .....	St. Louis .....	August 3, 1883, August 27, 1883.	2	1	276 10
Richland county—					
Olney, a .....	St. Louis .....	April, 1882, June, 1882.	7	0	1,253 68
Rock Island county—					
Moline .....	Chicago .....	November, 1881, February, 1882.			
Moline .....	Unknown .....	January 19, 1883, February, 1883.	27	6	3,727 35
Rock Island .....	Moline .....	March 8, 1882, April, 1882.			
Rock Island .....	Immigrant .....	April, 1882, June, 1882.			
Rock Island .....	Davenport, Ia. ....	June, 1882, July, 1882.			
Rock Island .....	Iowa City, Ia. ....	July, 1882, July, 1882.	20	2	2,761 00

*Tabular Statement of Localities Infected—Continued.*

Localities.	Origin,	Duration.	Number of cases...	Number of deaths.	Cost.
St. Clair county—					
East St. Louis.....	Railway travel.....	November 30, 1881, December, 1881.			
East St. Louis.....	St. Louis.....	December 4, 1881, January 5, 1882.	12	1	\$1,656 60
Belleville.....	Railway travel.....	February 24, 1882, March, 1882.			
Belleville.....	Tramps.....	February 16, 1883, March, 1883.			
Belleville.....	St. Louis.....	March, 1883, May, 1883.	8	3	1,104 40
Reutchler Station.....	St. Louis.....	May 26, 1883, June, 1883.	2	1	276 10
Saline county—					
Stone Fort.....	St. Louis.....	October 20, 1883, December 23, 1883.	15	9	2,070 75
Sangamon county—					
Springfield.....	Kentucky.....	January 7, 1882, February 12, 1882.			
Springfield.....	Tramps (4) times.....	January, 1882, April, 1882.			
Springfield.....	Chicago*.....	February, 1882, May, 1882.			
Springfield.....	St. Louis.....	April 26, 1882, May 6, 1882.			
Springfield.....	Railway service.....	May 1, 1882, June, 1882.	92	15	12,700 60
Wheatfield, a.....	Chicago.....	July, 1882, July, 1882.	1	0	82 00
Schuyler county—					
Bluff City.....	Beardstown.....	March, 1881, May, 1881.	18	4	2,484 90
Camden Tp.....	Unknown.....	April, 1881, June, 1881.			
Camden Tp.....	Keokuk, Ia.*.....	February, 1882, March, 1882.	4	1	552 20
Birmingham Tp., a.....	Keokuk, Ia.....	January 8, 1882, February 8, 1882.	3	1	760 00
Brooklyn Tp.....	Keokuk, Ia.†.....	January 16, 1882, February, 1882.	1	...	138 05
Huntsville.....	Keokuk, Ia.....	January, 1882, January 25, 1882.	1	1	138 05
Stephenson county—					
Freeport.....	Immigrant.....	January 1, 1882, January 17, 1882.	1	1	138 05
Silver Creek Tp.....	Chicago.....	February 1, 1882, March, 1882.	4	2	552 20
West Point Tp.....	Chicago.....	April, 1882, May, 1882.	3	0	414 15
Union county—					
Dongola.....	Cairo.....	December, 1881, March, 1882.	6	2	828 30
Vermilion county—					
Butler Tp.....	Chicago.....	September, 1881, October, 1881.			
Butler Tp.....	Chicago.....	March, 1882, May, 1882.	11	2	1,518 55
Wabash county—					
Mount Carmel, a.....	St. Louis.....	Novemb'r 21, 1881, December, 1881.	11	6	2,090 00
Warren county—					
Kirkwood.....	Railway travel.....	February 1, 1881, March, 1881.	6	2	828 30
Floyd Tp.....	Burlington, Ia.....	March, 1881, May 25, 1881.	9	5	1,242 45
Will county—					
Braidwood.....	Chicago.....	October, 1881, January 5, 1882.	20	2	2,761 00
Mokena, a.....	Not stated.....	October, 1881, November, 1881.	3	...	590 25

\* Five introductions.

† Via Birmingham Township.

‡ Constructive and estimated losses at Mokena, reported, \$9,500.

*Tabular Statement of Localities Infected—Continued.*

Localities.	Origin.	Duration.	Number of cases.	Number of deaths.	Cost.
Monee .....	Chicago .....	December, 1881, March 19, 1882.	9	0	\$1,242 45
Crete .....	Monee .....	January, 1882, April, 1882.	2	0	276 10
Peotone, a . . .	Chicago .....	February, 1882, March, 1882.	2	1	360 00
Homer Tp. ....	Chicago .....	March, 1882, May 16, 1882.	7	4	442 00
*Joliet, a .....	Chicago .....	March 18, 1882, June, 1882.	57	18	10,875 00
Winnebago county— Rockford .....	Milwaukee .....	May, 1881, June, 1881.			
Rockford .....	Chicago .....	October, 1881, November, 1881.			
Rockford .....	Chicago .....	March, 1882, August 30, 1882.	23	3	3,175 15
Laona Tp., a .....	Chicago .....	December 23, 1881, February, 1882.	8	2	511 00
Winnebago .....	Tramp .....	February, 1882, April, 1882.	4	0	552 20
Woodford county— Benson .....	Immigrant .....	March, 1882, April, 1882.	3	1	250 00

Constructive and estimated losses at Joliet, reported, \$15,525.

## DETAILS OF LOCAL OUTBREAKS OF SMALL-POX, 1882-1883.

Compiled from Reports of Correspondents.

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DURING the progress of the epidemic the following circular letters (Nos. 81-82), with supplies of the blank forms (Nos. 80 and 86) were sent to each locality whence small-pox was reported—in addition, to the circular, Concerning the Prevention of Small-pox, in sufficient number for distribution among the infected and exposed; and, whenever necessary, a supply of fresh vaccine points, for use in cases of pressing emergency:

[S. B. H. No. 81.]

### ILLINOIS STATE BOARD OF HEALTH,

#### OFFICE OF THE SECRETARY.

SPRINGFIELD, ———, 188—.

DEAR SIR:\* Accompanying this is a package of blanks for small-pox reports.

Will you kindly undertake to see that these are furnished, in sufficient number, to every physician in your neighborhood who has recently attended small-pox patients.

It is very desirable that all possible information concerning this disease should be acquired, to the end that such knowledge may be utilized for the prevention of future epidemics.

In this connection, also, your attention is asked to the blank for statement of the cost of the disease to your community, and which it is hoped you will find time to fill out and return to this office.

Very respectfully,

JOHN H. RAUCH, M. D.

*Secretary.*

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\*Addressed to secretaries or presidents of local boards of health, mayors of cities, presidents of village trustees, town clerks or supervisors, county commissioners, prominent medical men; or, where none of these were known, to the postmaster or leading citizen of the infected locality.



P. O. address: ..... Co., Ill.

Sir:—The following tables exhibit the actual cost and estimated cost of small-pox in this community since ....., 188., together with other data concerning the economic features of such sickness.

Very respectfully,

(Signed): .....

(Official title): .....

To the Secretary STATE BOARD OF HEALTH, Springfield, Illinois.

TABLE No. I.

Cost of small-pox hospital:—buildings, grounds, etc.	\$ .....
“ physicians, nurses and other employes in same .....	“ .....
“ medicines, subsistence, fuel, lights, transportation, coffins, repairs and other expenses of maintenance .....	“ .....
“ extra expense of burials .....	“ .....
“ gratis vaccination:—virus, salary of physicians, etc. ....	“ .....
“ disinfection:—labor, disinfectants, etc. ....	“ .....
“ quarantining infected premises:—special police, barricading, etc. ....	“ .....
“ subsisting quarantined persons .....	“ .....
“ property destroyed:—infected clothing, bedding, etc. ....	“ .....
“ printing placards, notices, ordinances, certificates, etc. ....	“ .....
All other items of expense defrayed out of the public funds .....	“ .....
Total .....	.....

TABLE No. II.

Estimated losses to common carriers by interruption to travel and traffic:	
to railroads .....	\$ .....
to steamboats .....	“ .....
to stage coaches .....	“ .....
to street railways .....	“ .....
to other conveyances .....	“ .....
Estimated losses to business by panic, quarantines, etc.:	
to hotel keepers .....	“ .....
to merchants of all kinds .....	“ .....
to manufacturers of all kinds .....	“ .....
to corporations of all kinds .....	“ .....
to laborers, artisans and mechanics .....	“ .....
All other losses to business:—including suspension of building or other construction; interruption of labor, etc. ....	“ .....
Total estimated losses .....	.....

TABLE No. III.

Actual cost to private individuals:	
Expenses incurred in care of sick:—medical attendance, nurses, medicines, etc. ....	\$ .....
Value of property destroyed on account of infection:—clothing, furniture, bedding, etc. ....	“ .....
Cost of cleansing and disinfecting premises, clothing, furniture, bedding, etc.; whitewashing, painting, kalsomining, etc. ....	“ .....
Cost of funerals .....	“ .....
Total .....	.....

TABLE No. IV.

	No. of schools.	No. of pupils.	No. of teachers.	No. of days closed.	
Public schools .....					
Private schools .....					

Churches and religious meetings interrupted during ..... days.

Estimated number of persons thus inconvenienced .....

Courts interrupted during ..... days.

Other public assemblages, places of amusement, etc., interrupted during ..... days.

TABLE No. V.

Total number of cases small-pox and varioloid from ..... 188...	
to ..... 188...	
Total number deaths from same .....	
Total number treated in hospital .....	
Total number deaths in hospital .....	

## REMARKS.

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S. B. H. No. 86.

ILLINOIS STATE BOARD OF HEALTH.

COST OF

SMALL-POX EPIDEMIC

1881-82.

Report of

..... County, Illinois.

[S. B. H. No. 82.]

## ILLINOIS STATE BOARD OF HEALTH.

OFFICE OF THE SECRETARY.

SPRINGFIELD, ———, 18—.

DOCTOR:\* Aside from every other consideration, it is assuredly to the physician's interest to put an end to a disease which injures his practice, by driving other patients away from him while he is so unfortunate as to have a small-pox case on hand.

It is hoped, by securing trustworthy data concerning the present outbreak, to be able to make some progress toward eliminating this disease from our midst, at least in its epidemic form.

Accompanying this are sundry blanks so arranged, it is believed, as to require but little labor to fill out, and return to this office for publication with due credit.

I trust you may find time to do so at an early date after the last cases have been disposed of in your vicinity.

Very respectfully,

JOHN H. RAUCH, M. D.,  
Secretary.

[S. B. H. No. 80.]

## ILLINOIS STATE BOARD OF HEALTH—SMALL-POX EPIDEMIC, 1881-82.

## SMALL-POX REPORT

Of..... M. D.

P. O. Address, ..... County, Ill.

Case No. .... Name..... Color:.....

Residence: .....

Age: ..... years. Sex: ..... Occupation: .....

*If a scholar, state whether public or private.*

Nativity: .....

*If a foreigner, state how long in this country.*

1. Source of contagion—as nearly as could be learned:

2. Date when first seen:

3. Stage of disease when first seen:

[CHECK THE PROPER WORD.]  
Incubative Febrile Exudative Suppurative

4. Character of disease:

[CHECK THE PROPER WORD.]  
Discrete Confluent Hemorrhagic Gangrenous

5. Termination of case—date of death or of discharge convalescent, and, briefly, any notable sequelae:

6. If others were infected by this case give names and residences, and address of attending physician:

7. Measures enforced to prevent spread of disease—including vaccination of others exposed, and result:

8. If the patient had previously had small-pox, state details, briefly:

9. Brief data of vaccinal history: If previously vaccinated—1. Where, as nearly as could be learned, with what virus, and in what country. 2. Number of vaccinal cicatrices visible, and character, typical, modified, or bad. 3. Probable effect of such vaccination on character and progress of this attack. If revaccinated, when, as nearly as could be learned, in what country, with what result:

10. If vaccination was attempted after exposure, when, with what virus, with what result:

11. If any other physician was in attendance upon this case, please furnish name and P. O. address:

\*This letter, with the blank form, No 80, was sent direct to the physician in attendance, where his address was known; in other cases its distribution was effected by means of the preceding letter, S. B. H., No. 81.

## REMARKS.

[NOTE.—Here, at discretion, make comments, and give further details, or elaborate replies. It is not expected that *all* the data indicated can be furnished in every case. This, however, need not deter the physician from reporting any case—no matter how meagre the details. If only the name and residence of a patient be reported it will have some value in perfecting the records of the epidemic. So, also, if the case was only seen and diagnosed—subsequently passing into the hands of another physician, or removed to hospital—the name and residence of patient, together with the name and address of subsequent physician, or designation of hospital, will serve as checks to prevent duplication of cases.]

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Additional copies of this blank may be obtained by addressing the Secretary of the STATE BOARD OF HEALTH, Springfield, Ill. In returning the reports to the Secretary, one stamp will be sufficient; any additional amount will be paid on receipt.

From the information obtained through these circulars and forms, and from responses to a number of supplemental circulars, and over 2,000 letters, the following details of local outbreaks have been compiled.

It has been found convenient, for reference purposes, to arrange this mass of matter alphabetically by counties, and chronologically as to date of appearance of the disease in the localities in each county.

## ADAMS COUNTY.

## CLAYTON:

There were two importations of the disease into Clayton, but without any spread. The first case, a railroad employé, contracted the contagion in St. Louis, of which city he was a resident. The disease was diagnosed December 8, 1881. The other case was that of a medical student who contracted the disease in the Keokuk, Ia., College of Physicians and Surgeons, and returned to his home sick, December 22, 1881. The railroad man presented a typical primary cicatrix (humanized virus); was unsuccessfully vaccinated after exposure;—recovered. The medical student is said to have been vaccinated, but when and with what virus is not stated; presented no evidence of vaccination;—died on tenth day. The rules of the STATE BOARD were promptly and efficiently carried out, and the disease confined to these two cases. Cost not reported. Duration of outbreak, thirty days—December 8, 1881, to January 6, 1882.

Reporter: T. G. BLACK, M. D., chairman Clayton board of health.

## RICHFIELD:

One of the students of the College of Physicians and Surgeons, Keokuk, Ia., returned to his home in Richfield, and soon thereafter developed a case of modified small-pox, diagnosed, in the febrile stage, January 2, 1882. From him there were 15 other cases, in three families, all of a mild type, the modification of the disease being attributable to recent vaccination and revaccination, induced by the excitement caused by the cases of small-pox in Payson township (Stone's Prairie), adjoining and along the northwestern boundary of Pike county, during the previous summer. Within 38 days after the appearance of the first case the local board reported to the STATE BOARD: "That the small-pox has subsided in this district; the houses where the disease was located have all been thoroughly fumigated and purified, and all the sanitary measures recommended by the STATE BOARD OF HEALTH have been complied with, and we believe all danger from the spread of the disease is now past." No other cases resulted. Total cost, \$3,160.

Reporters: Dr. W. C. TROTTER, attending physician and chairman board of health; J. W. BROWNING, WM. A. EVANS, members board of health.

## QUINCY:

The total number of cases which occurred at Q. is officially reported as 22, among which were 3 deaths. March 18, 1882, Dr. Drude, secretary of the local board of health, reported to the STATE BOARD the existence of a mild case of varioloid. Five days later Dr. Baker, the physician in charge of small-pox cases, reported four cases, all in the exudative stage—which would carry the date of infection back to about the 5th of March. Dr. Baker assigns the origin of the first three cases to infected rags used in a corn-planter factory; and the fourth case—which is the one first reported by Dr. Drude—to contact with the patient's brother, who was employed at this factory. The history of the rags it has been found impossible to obtain. Case No. 1 caused two more cases, Nos. 11 and 12, in his own family. Nos. 2, 3, 5 and 6 were members of the same family; as were also Nos. 4, 7, 8, 9 and 10 members of one family. No. 13, a railroad brakeman, although of the same family as Nos. 2, 3, 5 and 6, is said to have contracted the disease in Trenton, Mo., and to have communicated it to his brother, No. 17, also a railroad brakeman. No. 14 lived next



door to No. 4's family, and is supposed to have become infected through the exchange of money. The origin of case No. 15 is reported "unknown." No. 16, an undertaker, contracted the disease from the body of No. 3. Nos. 18, 19 and 22, one family, from No. 11. No. 20, wife of the undertaker, and No. 21, from No. 16.

The number of vaccinations after exposure is worthy of note. Of the 22 reported cases, 20 were so treated—14 with bovine virus, 8 successful and 6 unsuccessful; and 6 with humanized virus, 3 successful and 3 unsuccessful. Six of the 20 had been previously vaccinated, mostly in childhood; and of these 5 were failures in the vaccination after exposure. Of the remaining 11—never vaccinated until after exposure—10 were successful and 4 failures. None of those successfully vaccinated after exposure died.

The last case was discharged "convalescent," May 29, the outbreak having lasted about six weeks from the date of its first recognition up to the beginning of the last case.

Total reported cost, \$3,857.60.

Reporters: FRANCIS DRUE, M. D., secretary board of health; D. BRYAN BAKER, M. D., physician in charge of small-pox; L. H. A. NICKERSON, M. D., attending physician.

#### STONE'S PRAIRIE:

. See *Kinderhook Tp.*, Pike county.

### ALEXANDER COUNTY.

#### CAIRO:

The contagion was repeatedly introduced into C. by river boatmen, both from the St. Louis and Cincinnati trade. Between January 1 and July 1, 1882, there were known to have occurred 104 cases, with 15 deaths, in the city, and 22 cases, with 11 deaths, among rivermen, patients of the marine-hospital service. Cases occurred subsequently in the city, of which no report has been received.—By direction of the supervising-surgeon general, Surgeon Henry R. Carter, in charge of marine-hospital patients at this point, has furnished the details from which the data of cases Nos. 41-62, inclusive, in the appended Tabular Statement are compiled. Surgeon Carter adds: "Fifteen cases were introduced into the hospital, and these infected 3 (possibly 4) others only. One city case, from lack of proper care, infected 3 marines. [It should be explained that the marine-hospital patients and city patients are both received and treated in the same hospital building, under the charge of the Sisters of Mercy.] Of those infected by my patients, one, No. 58, was due to his wilful disregard of orders; one, No. 61, to an accident of which I had no knowledge at the time; and one, No. 57, to his refusal to be vaccinated, claiming to have had small-pox. I think these facts will compare favorably with the epidemic in the city, where from one case 95 in all were infected. The health officers, Thistlewood and Myers, state that no case in the city was caused by those in the hospital. There was only one case in the neighborhood of the hospital, and that not in the immediate neighborhood, being two squares distant; and the next nearest being a quarter of a mile away. I think that the vaccination of the school children probably saved Cairo from a very serious epidemic, as, except for that Order, very few colored children would have been vaccinated; and these would have been the most exposed and the most dangerous of any class, going all over town and crowding the streets to see the 'small-pox waggin.' Only two children who attended the public schools in Cairo had small-pox, namely, Mary Foster, white, and Mary Hamilton, colored. These were both vaccinated unsuccessfully, and before it was repeated sufficiently they were attacked by the disease. There was a great deal of spurious and worthless vaccine virus sold this year. I do not think the phagedenic sores (*ride "Notes" to Table*) are protective; I saw them followed in four instances by confluent small-pox."

It will be seen, by referring to the Tabular Statement, that only 2 out of the 22 cases had been successfully vaccinated previous to exposure, and both of these recovered; 6 others were vaccinated after exposure, and of these 5 recovered. Of 5 who were vaccinated within a month previous to exposure, and still exhibited phagedenic sores, two contracted confluent small-pox, one fatal, and two died of hemorrhagic small-pox. The mortality among the totally unprotected (including among those the cases in which vaccination resulted in phagedenic ulcers) was 77.9 per cent.

It has been impossible to obtain similar details concerning the epidemic in the city. The mayor, N. B. Thistlewood, reports 104 cases with 15 deaths, and cost, actual and constructive, \$3,860.

The disparity in the mortality between the city cases—14.4 per cent.—and all the marine-hospital cases—50 per cent.—is fully accounted for by the greater gravity of the disease under the conditions which obtain in the life of the rouabout and deck-hand. In several cases these patients were received in a moribund or hopeless condition.

Reporters: HENRY R. CARTER, Surgeon U. S. M.-H. S.; N. B. THISTLEWOOD, mayor.

#### COMMERCIAL POINT:

Two outbreaks of the disease occurred in this vicinity. The first cases appeared early in May, 1882, and this outbreak, embracing 15 cases and 5 deaths, lasted until the middle of July—the failure to control the disease being due to the use of worthless vaccine virus. After an interval of nearly six weeks, the disease reappeared, and lasted three weeks longer, causing 2 more deaths out of 8 additional cases. The source of the contagion in both outbreaks was traced to the neighboring city of Cairo,—the first supposed to be due to the individual sleeping in an infected hotel or boarding house. The public schools, with 5 teachers and 150 scholars, were closed for 60 days, and churches and religious meetings interrupted for about 3 months. Total number of cases, 23; of deaths, 7. None of the fatal cases had ever been vaccinated. Cost, \$3,300—of which amount \$1,600 is estimated and constructive.

Reporter: W. W. STEVENSON, M. D., attending physician.

## BOONE COUNTY.

## LEROY TOWNSHIP:

A case of small-pox, contracted in Chicago, was reported to the STATE BOARD, January 12, 1882; no details.

## BROWN COUNTY.

## COOPERSTOWN:

Three cases of variola and four of varioloid (none fatal) occurred at Cooperstown and vicinity during the winter and spring of 1881, but it has been found impossible to secure reports from the attending physician.

Reporter: JOHN F. BRADBURY, M. D.

## RIPLEY:

Dr. W. F. Miller reports, April, 1881, one case of unmodified small-pox in a lad 16 years of age. Discharged convalescent after two weeks' treatment.

## CARROLL COUNTY.

## LANARK:

December 22, 1881, a woman and child arrived in Lanark, direct from Chicago, where they had both just been vaccinated by the Health Department. On the 25th they were found to be in the eruptive stage of small-pox—the mother dying January 2, and the child recovering. From these two patients there resulted two mild cases of varioloid among the inmates of the house where they visited.

The mayor, Benjamin Noble, writes, January 5 1882: "We are using every precaution to prevent the spread of the disease, and enforcing the rules of the STATE BOARD OF HEALTH. Our school children have all been vaccinated, as have most of our grown people." As a result of these precautions, no other cases occurred. Duration of outbreak, 18 days; cost, \$468.

Reporters: J. HALLER, M. D.; BENJ. NOELE, Mayor.

## CASS COUNTY.

## BEARDSTOWN:

Owing to the death of three, and the removal of one, of the five physicians present during the outbreak in 1881, it has been found impossible to secure full details. The first case was discovered March 1; reported to the STATE BOARD, March 5. Dr. H. H. Littlefield, attending physician, furnishes the following history of this case:

"—; color, white; age, about 21 years; sex, female; occupation, housewife; nativity, United States. Never vaccinated. Had recently arrived from Iowa. Was first seen, March 1; then in febrile stage. Was immediately vaccinated in both arms. (Kind of virus used not stated.) March 4, eruption appeared on forehead and neck and two days after was well-marked, clear and distinct. Drs. Ehrhardt, Parker and Hahn were now called in and confirmed the diagnosis—*variola discreta*. On the 7th, pustules began to dry up, and the case terminated by abortion from the vaccination, which ran its course with the original disease. March 10th the patient presented the appearance of a case of two months' convalescence. A fortnight before arrival in Beardstown, this lady, travelling on the cars in Iowa, noticed a child, on the seat in front of her, on whom was visible some form of eruption. The child was restless, fretting and uneasy, and was undoubtedly suffering with small-pox at the time. The modifying effect of vaccination after exposure was well-marked in this case, as well as its protective effect in that of the husband who was vaccinated at the same time, and who, although in constant attendance upon the patient, escaped contagion. All others known to have been exposed to this case were also at once vaccinated."

Dr. E. C. Parker, since deceased, reported the total number of cases in Beardstown and Beardstown precinct at 32 with 16 deaths. "Dr. Ehrhardt, sr., since deceased, had three families and one isolated case; three deaths. Dr. Jos. A. Folonie had one family; two deaths. Dr. Folonie contracted the disease and died. Dr. Littlefield, one family; two deaths. He also attended Dr. Folonie. Dr. Parker [the reporter] six families and two isolated cases; eight deaths. Total, 32 cases, 16 deaths." These are all the details which have been received from the attending physicians.

The cost of the outbreak is reported at \$20,473.43, of which amount \$14,000 is constructive and estimated. Excitement ran quite high during the six weeks' prevalence of the disease. Both the public schools, with an attendance of 670 pupils and 11 teachers, and the private schools, with 65 pupils and two teachers, were closed for thirty days, as were also the churches and courts. A rigid quarantine was enforced against the town by the neighboring country.

The necessity for the disinfection treatment prescribed in Rule 11, of the BOARD's circular, is illustrated in Dr. Parker's account of a feather bed on which a patient had died. This, with all other articles in the room, was subjected to the fumes of burning sulphur for several hours; but the "contents" (i.e. feathers,) were not exposed, as the BOARD advises. Dr. Parker says, "All articles worn were disinfected and the feather bed, after disinfection (?) was given to the nurse. Her husband slept on it, took the disease and died upon it. It was then burnt."

Rule II of the BOARD's circular referred to (Preventable-Disease Circulars—No. 1: Small-Pox,) directs that the ticking of beds and pillows used by a small-pox patient, should first be treated by dipping in the "zinc disinfectant," and then be immediately and thoroughly boiled; while "the contents, if hair or feathers should be thoroughly baked in an oven."

Reporters: H. H. LITTLEFIELD, M. D.; E. C. PARKER, M. D., attending physicians.

#### CHAMPAIGN COUNTY.

##### CHAMPAIGN:

Reports from Champaign are very meagre. Requests for detailed information, with the necessary blanks, were mailed to the proper individuals in April, May and July, 1882; but up to date remain unanswered.

During July and August, 1881, there were four cases in the city; but the termination of the cases—whether ever vaccinated or not—the origin of the outbreak, and its cost, are all unreported. February 3, 1882, a man, recently arrived from Chicago, was found suffering from modified small-pox; had been vaccinated 25 years previous. His son, who had been constantly in his company for over two weeks, was successfully vaccinated just before leaving Chicago by the Health Department, and escaped. From the father, however, who was on the streets during the febrile stage, there resulted one case of small-pox (never vaccinated) and one of varioloid (when vaccinated, or how often, not stated). The small-pox case died on the ninth day; the other recovered, as did also the original case. The families of both were vaccinated, the rules of the STATE BOARD enforced, and no further spread of the disease occurred.

Reporters: L. S. WILCOX, M. D., mayor; H. R. BUCKLES, town clerk.

##### PHILO:

January 15th, 1882, a newsboy returned from Chicago to his family in Philo; on the 18th was found in the eruptive stage. The exposed members of the family were at once vaccinated; but the mother, three children and a boarder, all had mild attacks of varioloid. In the three primary vaccinations after exposure (the three children) the modifying effect upon the progress of the disease was well-marked. In the mother the revaccination after exposure was a total failure; but the other adult revaccination (the boarder) was effective, and is believed to have exerted some influence on the variola.

This family was quarantined in its own house; vaccination and revaccination were generally enforced in the community, and no spread of the disease resulted. Duration of outbreak, 39 days. Cost to the town, \$235.25; to individuals, business, etc., not stated.

Reporters: J. M. BARTOLOW, M. D.; J. D. MANDEVILLE, M. D., attending physicians; E. B. HAZEN, village treasurer.

##### PENFIELD:

One case of small-pox was reported at Penfield, near the eastern line of Champaign county, January 18, 1882. Vaccination had been very general, and no spread of the disease followed this case.

##### THOMASBORO:

Two cases of small-pox in Rantoul township—one in Thomasboro' and one in the country—were reported to the STATE BOARD February 1, 1882. No other data furnished.

##### ST. J. SEPH:

The railroad agent at this place was reported, March 5, 1882, in the eruptive stage. Had been vaccinated ten years previously with humanized virus; typical cleatrix visible. During January, 1882, was revaccinated with bovine virus five different times—but each unsuccessful. The attack was mild—discharged convalescent, March 25. Total cost to town (for gratis vaccination) and to individuals, \$165.

In the absence of known source of contagion, it is probable the disease was contracted from railway passengers or their baggage.

Reporters: W. B. SIMS, M. D., attending physician; V. J. GALLION, supervisor.

#### CHRISTIAN COUNTY.

##### ASSUMPTION:

Two cases of the disease occurred in Assumption, during February 1882. The origin is supposed to have been from a tramp at Macon (which see). The first case, reported February 4, had never been vaccinated, and had a severe attack of the confluent type, but recovered. His sister, who had been vaccinated twelve years previously (at the age of 14), was immediately re-vaccinated on the discovery of the disease, and escaped with a mild attack of varioloid. There was no further spread of the disease. Total cost, \$183. During the first alarm the public schools were closed, with 400 pupils and 6 teachers; but, after securing the vaccination of the children and teachers, were reopened, and no case appeared among them.

Reporters: R. W. JOHNSON, M. D., attending physician; J. M. BIRCE, village clerk.

##### EDINBURG:

A family of three persons—father, mother and son—arrived in Edinburg, from Chicago, during the latter part of March, 1882. A few days before leaving that city the son had a mild attack of varioloid, for which no physician was called. On the 3d of April, after arriving in Edinburg, the mother was found in the febrile stage of the disease, and on the 4th the father developed symptoms. The attacks were light in both cases, and recovery prompt. Both had been successfully vaccinated in childhood; and again in Chicago, during the winter of 1881-2—that with the mother being a failure, and with the father resulting in a modified cleatrix.



The usual precautions were enforced, and there was no spread of the disease; but excitement ran high for a few days, the schools, churches, etc., were closed, and the loss to the community, caused by the two cases, is put at \$2,578; direct cost to individuals, \$178; estimated and constructive, \$2,400.

Reporters: C. L. CARROLL, M. D., attending physician; JAMES MAGEE, town supervisor.

#### TAYLORVILLE:

Dr. JOHN E. WHITCRAFT reports one case of small-pox, under treatment and quarantine from December 8 to December 25, 1882. The patient, an adult, had only been vaccinated once—about eight years previous—but there were no marks visible. The patient recovered and no other cases followed. Vaccination and revaccination had been quite generally enforced during the previous year, and the case excited little attention.

#### MARSHALL:

A farmer, living near Marshall, returned from a visit to Cincinnati in the latter part of September, 1882, and a few days later was taken sick with an attack of modified small-pox. His wife and two children contracted the disease from him, but beyond the facts of their illness and recovery, no details have been received. The cost of the four cases to the town is stated at \$261.

Reporters: R. H. BRADLEY, M. D., attending physician; J. G. DOLSON, mayor.

### CLINTON COUNTY.

#### IRISHTOWN:

A man employed on one of the boats of the Mississippi-river survey, contracted the disease at a town in Arkansas; arrived at his home (Irish town,) in the febrile stage, on the 20th of February, 1882. The disease proved to be of the hemorrhagic type, and death ensued on the sixth day. Patient had never been vaccinated. Rules of the STATE BOARD were enforced, and no spread of the disease ensued. Vaccination was made very general. Cost reported, \$98.75.

Reporters: WILLIAM F. HAYS, M. D., Keysport, attending physician; SAMUEL BURNSIDE, chairman board of health, Carlyle.

#### CARLYLE:

See *Irish town*.

#### TRENTON:

February 27, 1883, a laborer from St. Louis, was found in the exudative stage of small-pox in a house "in edge of town" of Trenton, occupied by two families. The house was immediately quarantined, all exposed persons were vaccinated or revaccinated and kept isolated until after the usual period of incubation; thorough disinfection, fumigation, etc., were resorted to, and no spread of the disease followed. Patient, vaccinated in childhood, recovered. Cost of case, \$250, (medical attendance, \$75; nurse, \$100; loss of bedding, clothing, etc., \$75.) In the following June a woman, just arrived from St. Louis, was taken ill, and had a mild attack of modified small-pox; discharged, convalescent, June 14. The same precautions were observed as in the previous case, and no others were infected.

Reporters: E. P. TONEY, M. D.; THOS. GAFNER, M. D., attending physicians.

#### AVISTON:

A "walking case" of varioloid from St. Louis, stopped at a hotel and boarding house in Aviston, June 16, 1883. The character of his illness was not recognized until two cases of the disease appeared in the hotel about July 21, before which time, however, the visitor had "returned home when he saw he had not escaped the disease." After his departure it was learned that "a few days before he left he had a 'breaking out' on his body, but only a few pimples." Both the Aviston cases (modified) recovered, and enforcement of the usual precautions prevented any further cases. Cost of two cases, \$662.

Reporter: A. DE BUHRMANN, attending physician.

### COLES COUNTY.

#### MATTOON:

A negro preacher (one reporter styles him a "tramp,") contracted small-pox in the Union depot, St. Louis, about June 1, 1882. Was first seen in Mattoon, June 3; then in febrile stage of the disease. In the house where he was nursed were two colored families and a boarder—none vaccinated. Of these, a man and his wife—the latter four months pregnant—were vaccinated, the former two days, and the latter five days, after exposure. Vaccination was successful in both cases; although both contracted variola. The woman succumbed on the ninth day to the effects of hemorrhage following miscarriage during febrile stage. The husband recovered after a brief illness. The three remaining unvaccinated cases died. The weather was intensely hot at the time—the mercury reported 93°–95° in the shade. The house was in a thinly settled part of the town; was rigidly quarantined and all other precautions enforced. No other cases followed. Cost reported, \$347.20.

Reporters: P. A. KEMPER, M. D., city physician; J. W. DORA, M. D., attending physician; J. S. GOODYEAR, town and city clerk; MATT ALLCOTT, city marshal.



## OAKLAND:

Two weeks after his return from Cincinnati (in the latter part of August, 1883), a resident of Oakland had an attack of varioloid; had been vaccinated two years previous. The remaining members of the family, three in number, had never been vaccinated; contracted variola and two of them died. Two protected attendants also contracted mild cases of varioloid. The house was isolated, vaccination freely enforced, and no other cases resulted.

Reporters: W. M. CHAMBERS, M. D., Charleston, consulting physician; W. J. PEAK, M. D., Oakland, attending physician (during early portion of outbreak).

## COOK COUNTY.

## CHICAGO:

Health Commissioner DEWOLF furnishes the following facts concerning the epidemic in Chicago:\*

In my annual report for the year ending December 31, 1880, I called attention to the probability of the large introduction of small-pox by the immigrant class, unless immediate steps were taken to secure the proper vaccination of those strangers, either on shipboard or by detaining them at ports of entry. Sixty per cent. of all the immigrants reaching our shores pass to Chicago along the great lines of railroad transportation.

Many of them remain to become future citizens.

The immigration of 1881 was the largest ever received in this country to that time, and it brought the anticipated pestilence.

Chicago had been entirely free from small-pox from July, 1878, up to the last week in November, 1879, with the exception of one immigrant case in May of the latter year, but from which no other case resulted. Late in November, 1879, an immigrant suffering from small-pox arrived at the Hotel Denmark, an immigrant boarding house, and from him an employee of the house contracted the disease. This man died in December, and from him resulted one more case in December, eight in January (1880), four in February and three in March—none fatal. The disease was apparently under control and in process of extinction; but in April the usual arrival of immigrants reached us with a number of infected ones, and many others not protected by vaccination. There were thirty cases and nine deaths in April; twenty-two cases, four deaths in May, and thirty-nine cases, ten deaths in June.

Energetic vaccination, supplemented by the warm weather, caused a decrease in the disease, when the October immigration movement set in with an even more than usual increase of the number of cases. During the early winter months of 1881 the disease was present in a mild form, but in April the number rose from ninety-nine cases and thirty-one deaths in March, to one hundred and thirty-three cases and thirty-nine deaths; in May to one hundred and sixty-eight cases and sixty-eight deaths; in June one hundred and fifty-one cases and sixty-one deaths; in July one hundred and sixty-five cases and eighty-three deaths, followed by a slight decrease in August, which was succeeded by two hundred and fifty-two cases and one hundred and sixteen deaths in September; four hundred and fourteen cases and one hundred and eighty-eight deaths in October—the heaviest autumn immigration month; five hundred and twelve cases and two hundred and six deaths in November; and eight hundred and one cases, with two hundred and seventy-four deaths, in December, making a total for the year of 2,992 cases and 1,180 deaths. The epidemic culminated in January, 1882, when there were eight hundred and fifty-two cases and two hundred and seventy-one deaths, and thenceforward declined until it was substantially at an end in September last.

Dr. John H. Rauch, Secretary ILLINOIS STATE BOARD OF HEALTH, in reviewing the history of small-pox in Chicago and the Northwest for thirty-two years, 1851–1883, and commenting upon it as an argument for the continuance of the Immigrant Inspection Service under the direction of the National Board of Health, says:

"I.—The immigrant is a prime factor in the origin and continuance of small-pox in the United States—on the one hand, even if protected himself, often being the bearer of the contagion in clothing and other effects; and, on the other, if unprotected, frequently becoming a victim to the disease and propagating it to others.

"II.—Local effort and expenditure, either by States or municipalities, are inadequate to the control of small-pox in any given community or commonwealth, so long as the contagion and the material for the propagation of the contagion continue to be replenished by repeated accessions of unprotected or imperfectly protected immigrants.

"III.—A continuous sanitary surveillance of immigrant travel, from the port of arrival to the point of ultimate destination—such surveillance to consist of repeated inspections, vaccination of all unprotected, systematic observation of suspicious sickness, prompt removal and isolation of discovered small-pox or other contagious cases, disinfection of baggage, clothing, cars, etc.—is essential to supplement whatever preventive measures can be secured before embarkation, during the voyage, or at the port of arrival."

I believe these propositions to have been abundantly demonstrated by the epidemic of 1881–2, to which I have previously referred in detail. Our citizens had been efficiently protected by methodical house-to-house vaccination in the districts liable to general infection. Yet the daily arrival of immigrants suffering from the disease, and large numbers unprotected by vaccination and ready to receive the infection upon exposure, filled our hospital, until it became necessary, in February, 1882, to construct a larger building within the same enclosure. This new building was erected in ten days after contract, and in two weeks thereafter sheltered one hundred and fifty strangers, not one of whom could speak our language.

\*Report of the Department of Health, City of Chicago, for the Years 1881 and 1882.

The Immigrant Inspection Service undertaken by the National Board of Health, in June, 1882, was, in my opinion, the first intelligent and efficient attempt to check the almost universal prevalence of small-pox from the sea-board, along the lines of immigrant travel and the larger cities en route to the farthest Northwest. It placed qualified and honest medical inspectors upon all lines of immigrant transportation, who promptly removed from transit all developed or suspected cases, and rigorously vaccinated the unprotected. The inspectors of the Western district of this service, under the direction of Supervising Inspector Rauch, from June 1st to November 30th, vaccinated 20,123 immigrants on rail-roads entering this city.

Who can contemplate this vast amount of fuel, ripe and ready for the torch of infection so full of peril to each individual of the mass, and so charged with disaster and alarm to every community it entered—without a sentiment of gratitude that the beneficent labor of staying this pestilence had fallen into hands so worthy and capable; and who will not suffer a corresponding sentiment of angered chagrin and mortification that this labor of the National Board of Health has been arrested by the neglect of Congress to make the necessary appropriation for its continuance.

In the management of this epidemic I have found myself much embarrassed by the action of the City Council in revoking the ordinance permitting forcible removal from domicile to hospital of infected persons, whenever, in the opinion of the inspecting officer, proper isolation could not be secured at home. In former reports I have dwelt upon the necessity of such assistance in suppressing epidemics of small-pox. I only repeat that the public good demands the restoration of this municipal law.

In June, 1882, the hospital was placed under the charge of the Catholic Sisters, and I believe I should be sustained by every person admitted there, in asserting that no hospital in the country is more admirably conducted.

### RECAPITULATION of Small-pox Cases in the City of Chicago Reported During the Year 1881, by Wards and Divisions.

Wards.	Cases.	Divisions.	Cases.
First.....	115	} South.	380
Second.....	47		
Third.....	21		
Fourth.....	43		
Fifth.....	154		
Sixth.....	258		
Seventh.....	283		
Eighth.....	77	} West.	2,015
Ninth.....	88		
Tenth.....	116		
Eleventh.....	81		
Twelfth.....	65		
Thirteenth.....	46		
Fourteenth.....	998	} North.	584
Fifteenth.....	270		
Sixteenth.....	170		
Seventeenth.....	104		
Eighteenth.....	40		
From outside of the city.....	18		18
Total.....			2,997

### Cases of Small-pox in City and Hospital (Chicago) for 1881.

By Months.	Treated in City.		Treated in Hos- pital.		Total.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
January.....	28	13	54	16	82	29
February.....	36	13	62	21	98	34
March.....	56	19	43	12	99	31
April.....	56	18	77	21	133	39
May.....	} 301	} 156	} 305	} 107	138	57
June.....					149	66
July.....					156	72
August.....					163	68
September.....	193	102	59	14	252	116
October.....	315	160	99	28	414	188
November.....	401	167	111	39	512	206
December.....	604	216	197	58	801	274
Total.....	1,990	864	1,007	316	2,997	1,180

*Cases of Small-pox Treated in Chicago Hospital in 1882.*

By Ages.	Cases.	By Nativities.	Cases.
Under 1 year.....	44	United States.....	214
From 1 to 2 years.....	33	Austria.....	1
From 2 to 3 years.....	38	Bohemia.....	22
From 3 to 4 years.....	25	Canada.....	29
From 4 to 5 years.....	32	China.....	1
From 5 to 6 years.....	35	Denmark.....	6
From 6 to 10 years.....	69	England.....	22
From 10 to 20 years.....	146	France.....	3
From 20 to 30 years.....	322	Germany.....	311
From 30 to 40 years.....	157	Ireland.....	153
From 40 to 50 years.....	76	Italy.....	4
From 50 to 60 years.....	18	Norway.....	4
From 60 to 70 years.....	2	Poland.....	59
From 70 to 80 years.....	1	Prussia.....	4
Not stated.....	9	Scotland.....	11
Total.....	1,007	Sweden.....	70
Under 6 years.....	207	Switzerland.....	5
		Colored.....	28
		Not stated.....	15
		Total.....	1,007

Per centum of deaths of persons sick with small-pox remaining and treated at home 44.42.

Per centum of deaths in hospital, 31.7.

*RECAPITULATION of Small-pox Cases in the City of Chicago Reported During the Year 1882, by Wards and Divisions.*

Wards.	Cases.	Divisions.	Cases.
First.....	231	} South.	751
Second.....	238		
Third.....	51		
Fourth.....	81		
Fifth.....	149		
Sixth.....	468	} West.	1,910
Seventh.....	293		
Eighth.....	178		
Ninth.....	154		
Tenth.....	114		
Eleventh.....	66	} North.	935
Twelfth.....	102		
Thirteenth.....	70		
Fourteenth.....	465		
Fifteenth.....	390		
Sixteenth.....	274	} North.	935
Seventeenth.....	161		
Eighteenth.....	110		
From outside of the city.....	15		
Total.....			3,611

*Cases of Small-pox in City and Hospital (Chicago) for 1882.*

By Months.	Treated in City.		Treated in Hosp'l.		Total.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
January.....	748	271	290	74	1,038	345
February.....	594	224	215	57	809	281
March.....	461	201	177	61	638	262
April.....	249	123	103	27	352	150
May.....	171	88	88	23	259	111
June.....	94	34	56	15	150	49
July.....	75	16	24	8	99	24
August.....	18	3	10	1	28	4
September.....	4	4	6	1	10	5
October.....	55	16	36	5	91	21
November.....	51	15	14	4	66	19
December.....	36	15	36	6	71	21
Total.....	2,556	1,010	1,055	282	3,611	1,292

*Cases of Small-pox Treated in Chicago Hospital for 1882.*

By Ages.	Cases.	By Nativities.	Cases.
Under 1 year.....	29	United States.....	316
From 1 to 2 years.....	13	Austria.....	1
From 2 to 3 years.....	17	Bohemia.....	21
From 3 to 4 years.....	18	Canada.....	42
From 4 to 5 years.....	9	Denmark.....	15
From 5 to 6 years.....	32	England.....	43
From 6 to 7 years.....	78	Finland.....	1
From 7 to 8 years.....		France.....	4
From 8 to 9 years.....		Germany.....	325
From 9 to 10 years.....		Holland.....	2
From 10 to 20 years.....	260	Ireland.....	127
From 20 to 30 years.....	302	Italy.....	4
From 30 to 40 years.....	180	Norway.....	32
From 40 to 50 years.....	79	Poland.....	14
From 50 to 60 years.....	26	Scotland.....	13
From 60 to 70 years.....	4	Sweden.....	49
From 70 to 80 years.....	1	Switzerland.....	5
Not stated.....	16	Colored.....	30
Total.....	1,055	Not stated.....	11
Under 6 years.....	199	Total.....	1,055

Per centum of deaths of persons sick with small-pox remaining and treated at home, 39.5.

Per centum of deaths in hospital, 23.

During the year 1883 there were reported 178 cases and 46 deaths; mortality rate, 25.8 per cent. Of these, 116 cases were treated at home; 83 recovered and 33 died; mortality rate, 23.4 per cent. The remaining 62 cases were treated in hospital; 49 recovered and 13 died; mortality rate, 20.9 per cent.

In all there were 6,976 cases reported, with 2,518 deaths; mortality rate, 37+ per cent. Among the 4,533 cases treated at home, there were 1,874 deaths, giving a mortality percentage of 41.3. Of the 2,055 hospital cases 593 died, giving a mortality percentage of 29+.

The cost to the city, for hospital expenses, vaccination, etc., as reported, was \$75,121.90.

**BARTLETT:**

About the middle of January, 1881, a recently-arrived Swede, who had secured board with a farmer at Bartlett station three days before, was taken ill with a severe case of varioloid (had been vaccinated in childhood). He was nursed to convalescence by the farmer, who contracted the disease and died, January 31. The attending physician also became infected, but recovered. No other data furnished.



## NILES TOWNSHIP:

While but three cases, with one death, are reported from this township, there occurred fifteen cases in the practice of the reporter, Dr. M. H. Lukens, of Niles Centre, who also states that there were some ten or fifteen additional cases in the territory under his observation, embracing the townships of Evanston, New Trier and Niles.

In Evanston township Dr. L. reports three cases, the first an errand boy, *ætat* 15, employed in Chicago, where he contracted the disease. Had been vaccinated three times in childhood—each time a failure. No recent attempt. Patient apparently convalescent January 25, 1881, on about the thirty-third day. A fortnight later was attacked with erysipelatous inflammation about both knees, quickly followed by a great number of metastatic abscesses over the surface of the body, particularly the lower extremities. Discharged, convalescent, seventeen days later. An unvaccinated infant was infected through the attendant upon this case. Nearly six months later another case resulted, in same neighborhood, from contact with a case contracted in Chicago. No deaths among these cases; cost included in the aggregate of Dr. L.'s patients.

In New Trier township Dr. L. attended nine cases, with one death. The source of the contagion was Chicago. In one case, a male, *ætat* 31, exhibiting two modified cicatrices from primary vaccination in childhood, and one typical and one modified from revaccination when about 14 years old—the eruption, although profuse, presented no suppurative stage; the vesicles were small, and desiccated instead of suppurating, thus materially shortening the duration of the attack. A male, *ætat* 17, presented one modified and six typical cicatrices from a primary vaccination in Germany, when a child, with humanized virus. "Disease somewhat modified in its course." The fatal case had never been vaccinated—"German physicians objecting thereto, because of the presence of epileptic attacks."

In Niles township a family, consisting of mother and two children, were infected by a relative in Chicago—the mother directly, and the children mediately, through the mother. She had been vaccinated in Prussia, with humanized virus, and exhibited one modified cicatrix; the attack was of short duration (12 days) with little eruption. Of the two unvaccinated children, an infant (5 months) died on the 24th day after the exposure; having been unsuccessfully vaccinated, with bovine virus, on the 15th day after exposure, and again, with partial success (same virus) one week after the first attempt. "The day before death, vesicles almost empty—contents having been absorbed." The other child, *ætat* 3 years, was vaccinated at same time as infant, with same virus, and secured one modified cicatrix. Recovered, but the reporter adds, "It is uncertain whether course, or intensity, of attack was influenced by the vaccination."

The same general course was pursued by the attending physician in all these cases, namely, isolation of infected persons, vaccination of all exposed, quarantine of premises, and thorough disinfection after termination of attack. As a rule, the cases were thus confined to those first attacked or exposed. Total cost to individuals, \$486.

Reporter: M. H. LUKENS, M. D., Niles Centre, attending physician.

## LEMONT AND LEMONT TOWNSHIP:

The first outbreak in L. during the epidemic, began in August, 1881. A child belonging to a Polish family, returned from a visit to Chicago, where she had become infected. From her, the father, two sisters, and some ten or twelve others, contracted the disease. Among the eight cases reported, only one had been vaccinated; two were of the discrete type, five confluent, and one hemorrhagic; the latter and one of the confluent died.

After an interval of nearly a month from the termination of the last case of the above group, the disease again appeared almost simultaneously in three different families—the origin in each being reported "not known." Seven cases occurred, with one death, the last case being pronounced convalescent, November 12.

On January 26, 1882, the contagion was again introduced from Chicago, the first case infecting two families in the township. A total of eighteen cases with four deaths resulted before this outbreak was suppressed—about the middle of March. This does not include one isolated case, in the township—which occurred about the middle of February. Source of contagion, Chicago.

The last reported case occurred in May—a driver on the canal; disease contracted in Chicago; and death resulting May 23.

Among the total of 36 reported cases, 21 had never been vaccinated previous to exposure. Of these 21, there were 8 vaccinated after exposure—5 successfully and 3 unsuccessfully. The mortality was confined to those who had either never been vaccinated (13), or vaccinated unsuccessfully after exposure (3)—a total of 16, of whom 8 died.

During the winter strenuous attempts were made to secure general vaccination and revaccination. Manufacturers, quarry-owners, and the citizens, as a rule, favored this measure, and a large number of individuals were thus protected at private expense. Unfortunately, the first supplies of bovine virus proved totally inert, and the second winter outbreak is probably due to this fact. Only one public scholar was attacked, and this during the first outbreak, in August, 1881, before the STATE BOARD had ordered the vaccination of school children. Four private scholars, never vaccinated, were attacked, and one died. Two others, reported to have been vaccinated in Sweden—virus and result not stated—were also attacked, but recovered. Three of the unvaccinated were vaccinated after exposure, two of them successfully. In one family the father, *ætat* 50, had been vaccinated in childhood; nursed a case and contracted the disease—"a mild attack of the discrete variety." His large family, vaccinated in January, 1882, all escaped. In another family, the head of which helped nurse the same case, the father "did not believe in vaccination." He had a severe attack of confluent small-pox; conveyed it to his two children, whom he had refused to allow to be vaccinated, and one of these died. His wife, vaccinated in 1877, escaped, although she nursed the three cases.

The total cost of the epidemic is reported at \$12,633.47.

Reporters: J. B. ROOD, M. D., health officer; M. T. O'CLERY, M. D., health officer; J. C. SKELLY, M. D., township health superintendent; J. C. TEORPE, M. D., J. A. FITZPATRICK, M. D., attending physicians; M. E. KELLY, president township board of health; D. C. NORTON, president board of trustees.

#### NORWOOD PARK:

In the latter part of August, 1881, a child was brought by its mother from Chicago to Norwood Park, "to avoid going to the pest-house." The mother, and five of six other children, contracted the disease, notwithstanding vaccination as soon as exposure was determined, the virus used, bovine, proving inert. From this family the disease was conveyed to another in the immediate neighborhood, resulting in seven more cases and one death. Vaccination was freely and successfully resorted to after the demonstration of the worthlessness of the virus first employed, and the outbreak was confined to these two families. Total cases, 13; one death. No further details furnished.

Reporter: J. OWEN HUGHES, M. D., attending physician.

#### LAKE TOWNSHIP:

A total of 69 cases, with 16 deaths, is reported by the Health Department of the Town of Lake. The disease extended over a period of seven months, from November 2, 1881, to May 30, 1882, the contagion being repeatedly re-introduced from Chicago, of which the township is, practically, one of the suburbs.

Among the 16 fatal cases, one, a female, ætat. 39, had been inoculated when a child in Ireland; one, the feed-master at the Union Stock Yards, an American, ætat. 27, is reported to have been "vaccinated 17 times during life—8 times during the last two years—but never successfully;" and two others—a Swedish woman, ætat. 56, and an Irish man, ætat. 30—had been vaccinated, the former "in Sweden when very young; scar very small; never re-vaccinated;" and the latter in 1872, with bovine virus, "unsuccessfully." Of the remaining 12 no attempt had ever been made to secure protection by vaccination.

Out of the total 69 cases 32 had never been vaccinated or otherwise protected. Seven of these 32 were successfully vaccinated after exposure, and recovered. So that the mortality among the totally unprotected—excluding two of the cases above detailed from this class—amounts to over 60 per cent.; while, even including the Swedish woman with "the very small scar" 53 years old, the mortality among those who had been vaccinated at all was less than 4½ per cent.

Eight public scholars and one private scholar are reported, with the following vaccinal histories: 1 successfully vaccinated in infancy (at date of attack aged 15), never re-vaccinated; 1, ætat. 7, successfully vaccinated two years before; 1, ætat. 14, vaccinated, but result not stated; 4 from 7 to 14 years old, never vaccinated until after exposure (three of these successful); 1, ætat. 10, no data. All of these recovered; but the private scholar, ætat. 8, never vaccinated until after exposure, and then with bovine virus, unsuccessful, died on the twelfth day.

An interesting clinical observation is made in the report of case No. 17, Mrs. —, ætat. 39 years; occupation, housewife; nativity, American; source of contagion, her husband, who died Dec. 21, 1881, of hemorrhagic small-pox; date when first seen, Jan. 2, 1882; stage of disease, febrile; character of disease, discrete; termination of case, discharged recovered, Jan. 11; none others infected from the case; was quarantined at home, and rules and regulations of STATE BOARD OF HEALTH enforced; no previous vaccinal history; was vaccinated after exposure, Dec. 20, 1881, with bovine virus, producing a small vaccine pustule. The attending physician, Dr. Charles Caldwell adds, under the head of "Remarks:" Two days before the eruption made its appearance she had a sore throat, and applied a towel saturated with kerosene oil to her neck. When the eruption came out the pustules were all on the neck. If we only knew in time that the patient was going to have the disease, a blister or other counter-irritant to some part of the body might save the face.\*

The cost of the epidemic has not been reported.

Reporters: Drs. A. L. CORY, health commissioner; W. PARSONS, N. N. HURST, CHARLES CALDWELL, J. G. BERRY, G. M. COOPER, B. P. REYNOLDS, VAN VALKENBERG, JOS. REILLY, JACOB DAL and T. S. BIDWELL, attending physicians from Chicago; A. H. CHAMPLAIN and FRANKLIN CHAUETT, attending physicians, Englewood.

#### LAKE VIEW TOWNSHIP:

Its proximity to Chicago and the character of a large portion of its inhabitants rendered the work of dealing with the contagion in Lake View unusually difficult; and it was not until vaccination was made pretty general that the efforts of the town board were successful. As a result of the action indicated in the following, 1,650 vaccinations were secured in February and March, 1882; of these Mr. William Deering defrayed the cost of 1,036, and the town paid for the remainder:

The Board of Health respectfully request that all citizens, school boards, teachers of private schools, and employers of large numbers of work-people, will use what efforts they can in enforcing a general vaccination of the whole town, as being the only means to effectually break up the chances of small-pox becoming epidemic in our midst. There are already several cases in the town; it may be stamped out by a determined effort.

*Extract from action of the Lake View Board of Health.*

*Resolved,* That all persons take steps to secure vaccination, if needed; that all persons too poor to pay for it, will be vaccinated at the public expense.

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\*This expedient was in use in the Vienna General Hospital in 1863 (Schmidt's Jahrbücher, Band 139) and about the same time by Dr. Lyndon, a Confederate army surgeon. (Medical and Surgical Reporter, vol. xlvii, 1882.)

*Ordered*, That the President, in all cases where small-pox has appeared in a neighborhood, at once enforce vaccination in such infected region, and that the houses so infected be completely isolated, together with any other steps deemed advisable, that will confine the cases to as small an area as possible, as provided by the ordinances of the town of Lake View.

The first case of the disease in this epidemic occurred in November, 1881, and up to the close of March, 1882, there had been 96 cases, of which number 31 are reported as varioloid, or modified small-pox, and 65 as unmodified. Among the latter there were 31 deaths, while the former all recovered. No other details have been furnished.

Reporters: E. M. LANDIS, M. D., town physician; EDGAR SANDELS, supervisor.

#### HYDE PARK TOWNSHIP:

Although occasional cases of small-pox occurred in this township during the entire month of December, 1881, the first case reported to the STATE BOARD—and the first that attracted any serious attention—was in the family of a man in the village of Colehour, in whose house, about the middle of December, a man recently discharged from the Chicago small-pox hospital, died suddenly from pulmonary hemorrhage. On the 2d of January the head of this family was found in the exudative stage of the disease (eighteen to twenty-two days after exposure). His wife was at once vaccinated, and had a mild attack; his stepson, who refused vaccination, succumbed on the twelfth day. The wife, while under treatment at the hospital, secreted clothing, towels, etc., on the adjoining prairie, and these articles, subsequently given to her relatives and others, infected three more families. One of these, her daughter, died on the sixteenth day of the attack—"suppuration very extensive and gangrenous, especially in region of vagina and rectum." Her husband is referred to in the *Note to Case No. 169*, in Tabular Statement. After an interval of over a month—March 11 to April 13—the contagion was again introduced by a family of small-pox refugees from Chicago, two members of which, when found, were still in the desquamative stage. This family "secreted themselves in an old tenement in Colehour, where they remained four or five days before being discovered"—the discovery being made through the illness of one of the children. A family in the adjoining block became infected two weeks later, furnishing four cases and two deaths. The origin of the remaining cases in Colehour, and which occurred nearly a month after the removal of the last of the preceding group, to hospital, is not stated. A total of 17 cases and 4 deaths is reported as occurring between January 2 and June 6.

On the 12th of January a confluent case, in the exudative stage, was discovered in a boarding-house at Irondale, among its forty inmates. He had come to Irondale from Chicago about two weeks previous. The health officer "ordered the house quarantined, and, while preparing to remove the case to hospital placed the patient in charge of a nurse. While the nurse was asleep the patient robbed his pockets, left the house, and was never seen again." The house was disinfected, the inmates vaccinated, and no other cases occurred therein for over a month, when the contagion was again introduced from some unknown source. Thence up to the close of the outbreak, March 4, there was a total of 11 cases and 5 deaths, mainly in the boarding-houses occupied by puddlers, laborers, etc.

At Pullman, one of the residents, a woman, contracted the disease about the middle of January from meeting, as she claims, "a man in a Michigan Central railroad coach one evening who had small-pox." From this case resulted another, the woman with whom she boarded. Both recovered. The only other case reported was an Irish immigrant, who arrived in this country just before the Inspection-Service was begun. Had never been vaccinated, and died June 14, on the twentieth day, of gangrenous variola. Total 3 cases, 1 death.

Of the seven cases reported at South Chicago—the first in the latter part of January, and the last on the 12th of June, 1882—in six the source of contagion is not stated. The first case was found in the febrile stage, January 23; was within a fortnight of confinement, and was delivered, on the eighth day (beginning of suppurative stage) of a healthy infant; child was at once vaccinated, "and did not have small-pox, but vaccination worked well." Bovine virus employed. No. 207 (Tabular Statement) contracted the disease from No. 199, but the origin of No. 199 is unknown. On the discovery of No. 199, during the febrile stage, No. 207 was immediately vaccinated with bovine virus, which produced a typical cicatrix. Notwithstanding this, the child came down on the fourteenth day after vaccination with a "very severe attack of confluent small-pox." Revaccination, attempted during the febrile stage, was unsuccessful. Except in these two cases no connection is traceable between any of those occurring during the six months. Total cases reported, 7; deaths, 2.

Three cases—none fatal—are reported from Grand Crossing. Of these the first two contracted the disease in Chicago. The remaining case, origin unknown, proved to be a very severe attack of "confluent hemorrhagic," convalescence from which was very slow, the patient not being discharged from treatment until the sixty-eighth day.

The outbreak at Kensington began February 1, and the hospital was vacated March 24. The first case, a railroad engineer, infected his two sons, but—as in the case of another railroad engineer, who was found in the exudative stage three weeks later; and in the case of a German immigrant two months from Hamburg—the origin of the contagion is reported "unknown." Five cases, one death.

In the village of Hyde Park the first case was reported February 11; a laborer who had visited Chicago almost daily during the previous three weeks in search of work; in the exudative stage when discovered, but no other cases resulted. The second case, reported April 2, was similar in all respects. In the three remaining cases, reported April 29, May 17 and June 2, respectively, the origin is reported "unknown;" but in at least one of these cases the disease was clearly contracted in Chicago—one reporter asserting that "this case was spirited away from No. 159 Halsted street, Chicago, after being ordered to the pest-house by the city health officer. He was found three days later, in the eruptive stage, at No. 4629 Wabash avenue, Hyde Park."

Total reported, 5 cases, 3 deaths.



The first case at Roseland, reported in the exudative stage, March 22, was probably contracted in Chicago. From him resulted two other cases. The seven remaining cases occurred among three families from Holland—source of contagion "unknown." One reporter states that the first of this group was "the child of some newly-arrived immigrants from Holland."

Total reported, 10 cases, 5 deaths.

One case was reported at Woodlawn, in the exudative stage, April 2; and one at Riverdale, also in the exudative stage, April 21. Both recovered.

Among the noteworthy features, gleaned from the detailed reports, are the facts concerning the public school-children. A reference to the Tabular Statement will show that Nos. 139, 140, 151, 152 and 154 were public scholars, and that they had never been vaccinated. The first two were reported January 15, in the exudative stage; No. 139 died next day of hemorrhagic small-pox, and No. 140 died four days after of confluent small-pox. Nos. 152 and 154 contracted the disease from their father, case No. 145, and were reported February 15—No. 154 dying ten days after. No. 156, reported February 19, was one of the victims of the stolen hospital clothing—see Colehour cases.

All these cases were contracted within the first 30 days after the STATE BOARD ordered the compulsory vaccination of public school-children, and were among the first 20 cases which occurred in the township. After that period, and among the remaining 43 cases, there was not another case among the public scholars.

Total number of cases reported in Hyde Park township (ten localities), 63; deaths, 20. Cost to general township fund, \$3,065.22; to individuals, \$1,287.15. Total cost reported, \$7,352.37.

Reporters: G. H. CHAPMAN, M. D., Grand Crossing, health officer up to April, 1882; M. B. ARNOLD, M. D., South Chicago, health officer after April 10, 1882.

#### CICERO TOWNSHIP:

Three cases are known to have occurred in Cicero during December, 1881, and January, 1882—one of these in a family just moved into the township from Chicago. No other details have been received, the only communication being from Supervisor J. J. McCarthy, in which these cases are mentioned.

#### SCHAUMBERG TOWNSHIP:

A farmer in Schaumburg, two weeks after a visit to Chicago, came down with a mild attack of modified small-pox, early in January, 1882. The other members of the family were at once vaccinated; the premises were quarantined, and, at the termination of the case, were thoroughly disinfected. No other cases followed.

Reporters: H. W. VANDERHOOF, M. D., of Bloomingdale, attending physician; A. Fosse, Supervisor.

#### JEFFERSON:

No cases are reported to the STATE BOARD from the town of Jefferson; but on the 16th of January, 1882, the health officer reported to the board of trustees four cases in three families. In the Cook county hospital for the insane there were 12 cases, no deaths, among the inmates, during January and February. Dr. J. C. SPRAY, the superintendent, writes:

"You will see that we escaped very well, but I can only credit it to thorough vaccination. As soon as I saw small-pox becoming general, I ordered every person both in the Poor House and Insane Asylum, about 1,200 people in all, to be re-vaccinated, and then every person admitted to either place to be vaccinated before being received, and generally the clothes of tramps and of the worst cases to be destroyed upon admission. In this way we escaped entirely till late in the year, when it broke out in several different wards at one or near the same time. These were people who had probably been exposed in the city.

"In re-vaccinating the insane, I noticed that an unusual number of cases run a regular course, like a primary vaccination. The number of sears among them was no indication as to the probable course the vaccination would run."

#### ELK GROVE:

One case, contracted in Chicago, was reported from Elk Grove, January 4, 1882. The local board isolated the case, "vaccinated all children and revaccinated all others." No other cases resulted.

Reporters: ELIJAH SMITH, M. D., Iraska, DuPage county, attending physician; CHRISTIAN BUSSE, supervisor; ELBERT WHEELER, town clerk.

#### BARRINGTON:

A Polish family removed from Chicago to Barrington January 5, 1882. On the 11th an infant in the family was discovered in the exudative stage of small-pox; died on the 16th. Isolation, vaccination of exposed, and other precautions were enforced after the 11th, but up to that time members of the family had been at the railroad depot, in stores, etc., daily. One other case is known to have been thus caused, but no details received.

Reporter: WILLIS BUTTERFIELD, M. D., attending physician.



**PALATINE:**

Five cases, with 1 death, are reported from Palatine. Source of contagion, Chicago. One case of "mild varioloid" occurred in February, 1882—a public scholar, aged 10 years. No details as to vaccination given. Total cost, \$451.00.

Reporters: T. E. WADHAMS, M. D., and S. E. HULETT, M. D., attending physicians; J. B. CLAY, town clerk.

**PALOS TOWNSHIP:**

An unknown man, who had died of small-pox, was found, February 19, 1882, in a vacant house, belonging to the Chicago & Alton Railroad company, a mile or so southwest of Willow Springs, in the town of Palos. The body was buried by the town authorities, and the house disinfected by the agent of the railroad company at Willow Springs.

Reporter: STEPHEN HALLIGAN, supervisor, Palos.

**BREMEN:**

Two outbreaks were reported in Bremen, between the latter part of February and the last of March, 1882. Concerning the first, Dr. Kauffman writes: "The father, mother and oldest daughter had modified small-pox (in February), having been previously vaccinated—the father and mother in childhood and the daughter two months previous to attack. The family lived one and one-half miles from town, and as the first three members were not seriously ill no physician was called. I was not sent for until the boy, the fourth case, was supposed to be dying. The father, who peddles farm produce in Chicago during the winter, admitted having taken a meal in a house in that city, where the mother and two children were sick—the children subsequently dying of small-pox—and took his pay in paper money, for produce sold before quitting this house." The boy when first seen, March 11, was in the suppurative stage, and although the remaining three children were at once successfully vaccinated it was too long after exposure to prevent an attack—variola and vaccinia progressing together in all three; but in the opinion of the physician, the severity of the graver disease was modified by the vaccination.

After an interval of about six weeks an unvaccinated infant in another family had a mild attack of unmodified small-pox—convalescence being complete on the eighteenth day. It is mentioned that "the mother, who nursed the babe, underwent primary vaccination three months before." Source of the contagion in this case, "unknown."

Reporter: J. S. KAUFFMAN, M. D., Blue Island, attending physician.

**COLEHOUR:****IRONDALE:****PULLMAN:****SOUTH CHICAGO:****GRAND CROSSING:****KENSINGTON:****HYDE PARK:****ROSELAND:****WOODLAWN:**

See *Hyde Park Township*.

**EVANSTON TOWNSHIP:****NEW TRIER TOWNSHIP:**

See *Niles Township*.

**CRAWFORD COUNTY.****ROBINSON:**

The outbreak at this place in May, 1884, attracted much attention on account of certain sensational features which are set forth in the following statement of the attending physician:

"The body of Susan Young was sent to Robinson by express from Cincinnati, on Friday, May 4, accompanied by a permit to ship, signed by Dr. D. D. Bramble, health officer of Cincinnati, to J. F. Wiltse, undertaker, and giving the cause of death as purpura hemorrhagica. At the same time a telegram was received by the girl's mother, Mrs. Caroline Young, stating that the body had been sent, and would not be in a condition to be exposed. This was signed by the attending physician in Cincinnati. The local undertaker at Robinson took the body to Mrs. Young's residence, two miles north of town—and, at her urgent request inspired by doubts as to the corpse being that of her daughter, he opened the coffin in the presence of the relatives and a few friends of the family. The body was examined until they were satisfied as to its identity, when the coffin was closed, and remained in the house until next day, when burial took place at the neighboring cemetery, in the presence of quite a number of persons, but the coffin was not again opened. Of the whole number exposed, five took small-pox after the usual period of incubation. These were taken sick May 15, Tuesday, and the disease was recognized as

small-pox on the following Friday morning, although it was suspected on Thursday. Of these five cases, Mrs. Young and the undertaker died, she on the fourth and he on the eighth day of the disease. Mrs. Young's was a typical case of variolosa hemorrhagica, and his proved to be of the confluent type. The old lady had never been vaccinated. The undertaker was vaccinated twenty years ago, and never revaccinated. Of the other three cases above mentioned, one had been vaccinated in infancy, but not revaccinated, and had an ordinary attack of discrete small-pox, ending in recovery. Neither of the two children had ever been vaccinated, and both had confluent small-pox, ending in recovery. The other resulting cases were two nurses of the Young family during their sickness, and the undertaker's wife and child, 3 years old, who were with him during his sickness. Of the two nurses, one had been vaccinated eight years ago, and the other some twenty years before. Both had very mild varioloid; one had two pocks, the other five, none on the face in either case. The undertaker's wife had spurious vaccine disease a number of years ago, and was vaccinated when it was ascertained her husband had variola, with the effect of modifying the disease to some extent, although she was very sick."

Dr. Rafferty writes that in this last case the vaccination that "took" was not performed until seven days before the initial variola fever set in. The little girl was unvaccinated until after her exposure, but the disease in her case was greatly modified, and of short duration. These nine cases, with two deaths, constituted the extent of the original outbreak, and were all in the two houses where the disease first occurred. The last of these cases was discharged convalescent June 23; but on the 17th of July another fatal case was reported, "the result of gross carelessness on the part of a nurse and the woman living next door to one of the infected houses."

Very naturally there was intense excitement in Robinson and vicinity during May and June; the town is said to have been almost depopulated, public schools were closed and business suspended. A board of health was organized, consisting of three of the resident physicians, who enforced vaccination, and the strictest isolation of all who had been exposed until the usual period of incubation had passed. On referring to the Vaccination Returns from Crawford county, it was found that the School Vaccination Order of the Board had been imperfectly complied with. Instructions, with new sets of blanks, etc., were at once forwarded to the county superintendent, and the authorities were advised that the closure of the schools would be entirely unnecessary if the scholars were properly protected by vaccination.

A letter was addressed to Dr. Bramble, the Cincinnati health officer, on the 1st of June, asking for a statement of the facts concerning the shipment of Susan Young's body, but no reply has been received from him. The antecedent history of Susan Young's case shows that she was attending a private boarding school for music in Cincinnati; that after an absence of some days in Kentucky she returned to the school, was taken ill, developing symptoms which led to a diagnosis of purpura hemorrhagica—the diagnosis being concurred in by two consulting physicians—was treated for purpura, and died on the eighth day. It transpired that the possibility of the case being one of purpura variolosa, or hemorrhagic small-pox, was discussed, but not accepted; and that consequently no restrictive measure, no isolation of the patient, no revaccination of the other inmates of the house, was resorted to. Within two weeks after her death two of these inmates were attacked with what was finally recognized as small-pox, and subsequently a third case developed, one of the three dying of purpura variolosa.

Reporters: T. N. RAFFERTY, M. D., J. L. FIREBAUGH, M. D., S. D. MESERVE, M. D., local board of health and attending physicians.

#### CUMBERLAND.

##### UNION TOWNSHIP:

The outbreak of small-pox in this township in 1876—when twenty-five cases, with ten deaths, occurred in about thirty days—sufficiently demonstrated the value of proper precautionary measures in the presence of contagion; so that on the appearance of a case on March 1, 1882, the patient was promptly isolated under the care of two experienced small-pox nurses, vaccination of all known to have been exposed was enforced, and thorough disinfection of premises, clothing, etc., was secured at the termination of the case. The patient was a Colorado farmer, visiting his family in Union township, and is supposed to have contracted the disease during a trip to Chicago. The total cost of the case was \$540—all borne by private individuals.

Dr. Bruce writes: "The complete isolation of patient and thorough vaccination or revaccination of exposed persons—coupled with the fact that the Lucy and Miller school districts (Union township, Cumberland county,) in which vicinity the case occurred, were thoroughly vaccinated with bovine virus, by myself, under the order of the STATE BOARD OF HEALTH, previous to the outbreak, prevented further cases."

Reporters: R. T. WILLIAMS, M. D., attending physician; W. W. BRUCE, M. D., both of Casey, Clark county.

##### CROOKED CREEK TOWNSHIP:

A case of confluent small-pox, contracted in Chicago, was reported to the STATE BOARD from Crooked Creek township, March 8, 1882. Prompt measures of isolation, disinfection and vaccination were resorted to, and there was no spread of the disease. The case proved fatal.

#### DE KALB COUNTY.

##### DE KALB:

A laborer, returning from New Orleans, reached DeKalb in the latter part of November, 1881, in the febrile stage of small-pox; was at once removed to small pox hospital; all known to have been exposed were vaccinated and other usual precautions observed.

No other cases occurred until the following April, when the disease made its appearance in the family of a farmer living about three miles from the village. The cases in this family were all of a mild type and atracted no attention—in fact, were not recognized as small-pox until a neighboring family became infected and eight cases, with two deaths, resulted. The premises of both families were quarantined, disinfected, etc., all exposed persons were vaccinated, and the disease was limited to these two households.

Reporters: E. R. SMITH, M. D., member local board of health and attending physician; L. M. McEWEN, town supervisor; E. B. GILBERT and A. O. JACKSON, health commissioners.

#### SYCAMORE:

One case of small-pox, origin unknown but attributed to Chicago, appeared in Sycamore during the winter of 1881-82. No details have been furnished.

### DE WITT COUNTY.

#### HARP TOWNSHIP:

A young man, after spending a month visiting in Indiana, returned to his home in Harp township, and was found the next day, January 13, 1882, in the febrile stage of small-pox. The attending physician caused his removal to an isolated building; vaccinated all who had been exposed, both in the township and in Clinton, where he had spent some hours. In the family where the patient was found were nine persons, all unvaccinated, until the date of the physician's visit. No other cases resulted. Under date of January 31, 1882, the attending physician writes:

"In regard to the case of varioloid, reported by me on the 16th, I would state that it pursued a typical course with but little secondary fever. The persons with whom he came in contact from Thursday, the date of his arrival, until Saturday morning, when he was quarantined, were thoroughly vaccinated and kept at home under observation. The health board of Harp township, in which the case occurred, did their whole duty and strictly carried out the rules and regulations of the STATE BOARD. The result has been we have not had another case. It has now been seventeen days since any one has been exposed to infection from him. The persons who have been exposed to infection will now be allowed to pursue their usual business. The case shows that if physicians and the township boards will do their duty, regardless of outside suggestions, the pest may, in most instances, be stamped out."

Reporters: JOHN A. EDMISTON, M. D., Clinton, attending physician; B. L. WILLMORE, town clerk.

#### CLINTON:

A mild varioloid case, contracted in Decatur, was reported from Clinton, January 17, 1882. February 12, 1882, a case of varioloid was discovered in a house of ill-fame in the heart of the city. The inmates, three women, two men and two children, were promptly removed to the small-pox hospital. These had all been vaccinated within the previous five years. With the exception of the patient they were revaccinated, four of them successfully. Owing to the character of the house there had been many exposed whom it was difficult to find; but, as far as possible, they were looked up, vaccinated, and kept under observation. No other cases resulted. Total cost of case and precautions, \$370.

Reporters: JOHN A. EDMISTON, M. D., attending physician; D. MACARTHUR, town clerk.

### DUPAGE COUNTY.

#### MILTON TOWNSHIP:

In November, 1881, a domestic, employed in Chicago, contracted varioloid and went to her step-sister's in Milton township. From this case resulted three others in this family, unmodified, one fatal. No physician was asked to visit any of these cases; no care was taken of them; the one that died was found dead in her room and frozen. In December a hired man, at work near Lombard, contracted the disease and went to his sister's in Milton township; thence to Chicago where he died in hospital. His sister and one other person contracted the disease, the former dying. Total cost reported, \$259.25.

Reporters: S. P. SEDGWICK, M. D., Wheaton, EDWARD VOGELER, M. D., Wheaton, CHARLES W. OLESON, M. D., Lombard, attending physicians; AMOS CHURCHILL, supervisor.

#### HINSDALE:

A railroad clerk, residing at Hinsdale, but visiting Chicago daily, was found, December 1, 1881, at the beginning of the eruptive stage of small-pox. The disease proved to be of the confluent type, with hemorrhagic tendency, and proved fatal on the ninth day. Patient had been vaccinated in childhood, but refused revaccination recently. The whole town, as nearly as could be reached, was vaccinated, and no spread of the disease followed. The cost of the individual case was \$155; of gratis vaccination, \$10; total, \$165.

Reporters: THOMAS T. HOWARD, M. D., Hinsdale, and N. B. DELAMATER, M. D., Chicago, attending physicians; C. C. WARREN, president village board.

#### BLOOMINGDALE:

A hired man, in the family of a farmer near Bloomingdale, visited Chicago, where he spent two days just before Christmas, 1881; had not been away from the farm for two months previous. January 2, 1882, was found in the febrile stage of the disease, and soon thereafter went to Chicago for treatment.\* Five other cases resulted in the family, one of

\* See Lombard.



which terminated fatally. With the exception of the mother none of the seven members of this family had ever been vaccinated. Concerning the mother the attending physician remarks: "She had been vaccinated about sixteen years before. In common with her husband and children she exhibited all the symptoms of the disease up to about the fourth day of the febrile stage, when they all disappeared without any interruption, and she continued perfectly well while nursing all the sick." A child, two years old, not directly exposed to the first case (the hired man), was vaccinated (primary) about one week after the exposure of the others and escaped entirely.

Reporters: H. W. VANDERHOOF, M. D., attending physician; WILLIAM RATHJE, president town board of health.

#### ELMHURST:

One case is reported as having occurred in February, 1882—origin attributed to Chicago. Six other inmates of the building, which comprised "two very small rooms, in one of which the patient was cared for," were vaccinated (all primary, 3 adults, 3 children) on the first visit of the attending physician. Notwithstanding the close quarters, and consequent thorough contact and exposure, these all escaped—the vaccinations taking on the third day, being the tenth after exposure. Cost of case to town, \$30.

Reporters: T. J. T. FISCHER, M. D., attending physician; ADAM GLOS, town supervisor.

#### WHEATON:

The keeper of a hotel and saloon in Wheaton contracted small-pox in Chicago, during a visit to which city he went into a house where a small-pox corpse was lying. He was found in the febrile stage at his home on the 12th of February, 1882. Had been vaccinated when nine months old, in Germany; but had obstinately refused revaccination when offered by the village authorities. From its proximity to Chicago and consequent exposure, vaccination, although not compulsory, was pretty generally enforced in the village and the community was well protected. No other case occurred. The cost of this was \$175, and the constructive and estimated injury to business, etc., is reported at \$10,800; of gratis vaccination, salary of physician, etc., \$309—making the total cost \$11,284.

Reporters: F. N. ENGLEHARD, M. D., attending physician; O. P. SEDGWICK, president of the board of health.

#### LOMBARD:

A young lady, clerking in Chicago, contracted small-pox about the middle of February, 1882; had been vaccinated in childhood, no scar visible; revaccinated about one month previous, resulting in a large, but not typical, scar. This case recovered, but her mother, concerning whose vaccinal history "nothing is known," was attacked during the daughter's illness and died on the ninth day. "For a number of years she had suffered with epithelial cancer of the hard palate." The daughter, discharged convalescent from the variola, March 14, was then suffering with posterior synechia of iris, ulceration of cornea and hypopyon. A board of health was at once organized in the village, on the first appearance of the disease. Vaccination was generally enforced, and the Rules and Regulations of the STATE BOARD were carried out.

The hired man, mentioned as the source of the five cases at Bloomingdale, stopped one night *en route* for Chicago, at his sister's house in York township, five miles south of Lombard. From him, his sister and a farm hand contracted the disease, the sister dying on the twelfth day, of the confluent type, and the hired man making his way to Chicago for treatment. Two other cases, also attributed to this hired man, are said to have occurred in Milton township, near Lombard. Supervisor Churchill is spoken of by correspondents of the BOARD, as having "shown much interest and skill in his efforts to keep all the small-pox cases in his town properly quarantined."

Reporters: F. N. ENGLEHARD, M. D., Wheaton, and CHARLES W. OLESON, M. D., Lombard, attending physicians; J. T. READE, chairman local board of health.

### EDGAR COUNTY.

#### PARIS:

A Bavarian immigrant, *ætat* 40, arrived in Baltimore, via steamer Hermann, on the 12th of March, 1882. On the 14th he reached his destination at Paris, falling on his arrival. Seven days later, March 21st, his disease was sufficiently developed to be pronounced small-pox, modified by vaccination in childhood. He was at once removed to an isolated building outside the city limits; all known to have been exposed were again vaccinated, although this measure had been pretty generally enforced some three months before, all indigent persons being then vaccinated at the expense of the corporation. No spread of the disease followed, and no other details have been received except that the case terminated in recovery.

Reporters: JOHN TEN BROOK, M. D., attending physician; D. B. ELLIOTT, mayor.

### FAYETTE COUNTY.

#### FARINA:

A woman, recently returned from St. Louis, was reported, November 25, 1883, in the febrile stage of unmodified small-pox, near Farina. Recovered, without any other cases following. December 8, another case was reported in Lone Grove township, a few miles from Farina. This case was contracted by "riding in a carriage with a man who had been with a case of small-pox in St. Louis, the day previous." No spread from this patient, who had been vaccinated two years before and had a mild attack of varioloid.

Reporters: N. R. HANCOCK, M. D., attending physician; J. F. WARNKE, town clerk.

#### LONE GROVE TOWNSHIP:

See *Farina*.



## FORD COUNTY.

## GIBSON CITY:

Three cases occurred at Gibson City as the result of contagion introduced from the Cropsey (McLean county) cases. A man who had been nursing his brother, ill in Cropsey with small-pox, contracted in Chicago, came to Gibson City, in April, 1882, and was there shaved and had his hair cut. The barber contracted the disease, and in turn infected two others. "The case was not diagnosed small-pox until the seventh day of the eruption. A great number of people—fifty, at least—were exposed before its nature was known. As vaccination had been very general during the previous winter, it is, probably, due to this that only two of those exposed contracted the disease. One of these was a child, two and a half years old, who had never been vaccinated until after exposure; and the other, a youth of twenty, vaccinated when a child, but not revaccinated after puberty." "This latter case afforded a good illustration of the simultaneous progress of the two diseases, and the manifest advantage of vaccination. Notwithstanding that the eruption was quite profuse, and that some pustules developed, resulting in the usual cicatrices, by far the greater proportion of the vesicles were arrested in development, dried up, and disappeared as vesicles. One might almost say, with reference to this case, that small-pox aborted in the vesicular stage." Considerable excitement prevailed among the neighboring communities for a time, some of them enacting severe prohibitory quarantine ordinances, whereby much loss and annoyance were entailed. The total reported cost was \$3,687, of which sum \$2,750 is constructive and estimated.

Reporters: T. B. STRAUSS, M. D., and S. BAUGHMAN, M. D., attending physicians; C. H. YEOMANS, supervisor.

## PAXTON:

An importer and breeder of horses returned from France on the small Danish stock boat *Friga*, arriving in New York August 22, 1882. Among the stockmen on board one had a slight attack of varioloid, which developed after leaving Havre, and from which case the importer above mentioned contracted the disease. He arrived in Paxton August 25, in the febrile stage; had escaped the immigrant inspection service by traveling as a first-class passenger. The disease was at once recognized; the premises were quarantined, and revaccination of all exposed was enforced as soon as virus could be obtained. Unfortunately the contagion extended to three other members of the family, resulting in two cases of mild varioloid and one fatal case of confluent small-pox. The community had been well vaccinated during the winter of 1881-82, and there was no further spread of the disease.

Reporter: J. Y. CAMPBELL, M. D., attending physician and chairman board of health.

## FULTON COUNTY.

## CUBA:

In the early part of January, 1881, a young man, living in the country near Cuba, returned from a visit to Burlington, Iowa, where, it subsequently transpired, he had contracted small-pox. He had been imperfectly vaccinated, and the disease terminated fatally about the middle of January. A day or two before his death he was visited by a clergyman from Cuba, who subsequently also officiated at the funeral. On the 25th of January the wife of the clergyman died of "congestion of the lungs and stomach," (according to the certificate of cause of death,) the result of premature confinement. A large number of women visited her during her illness, nursed her, sat up with her corpse, and attended her funeral, the body being taken to Astoria, in the southwest part of the county, for burial. Four days after her death the infant died, and the appearance of a post-mortem eruption on his body created the first apprehension as to the character of the disease, which was soon increased by the appearance of varioloid in the surviving members of the family of the first case. Of thirteen women who visited and nursed the clergyman's wife during her illness, ten contracted the disease, and of these four died. February 21<sup>st</sup> the attending physician publicly amended the certificate of the cause of death by stating that he was convinced, and had "been for two weeks, that she [the clergyman's wife] had small-pox undeveloped." By this time there had been 37 cases and 10 deaths in Cuba and the immediate vicinity. The father, mother and three children in the family of the first case took the disease, but all recovered, being protected by vaccination. The clergyman himself was protected by a previous attack of small-pox; but his wife and three daughters, all unprotected, died, and his brother, protected by vaccination, had an attack of varioloid. Two of the attending physicians, and the two children of one of them, also had attacks of varioloid. In all, up to March 1, there were reported 55 cases, of which 38 were in the town of Cuba and 17 in the immediately surrounding country. Of the 55 cases, it had never been vaccinated, and among these occurred the 11 deaths. From the clergyman's family the disease was conveyed to New Mayssville, in Pike county, by a son who returned home with a married sister to this latter place after the funeral, and four days after his arrival had an eruption which was first called measles, and subsequently chicken-pox. During his convalescence he visited Griggsville, where the disease next appeared, and subsequently it spread to New Salem.

No reports have been received from attending physicians or others concerning this outbreak at Cuba; and the foregoing facts were learned by the Secretary during his visit to the locality in the latter part of February, 1881.\*

\* Under date of January 12, Mr. D. S. HARRIS, who was secretary of the Cuba board of health during the epidemic, furnishes the following: "1. A post-mortem eruption upon the breast of the mother created the first appearance of the suspicion of the disease.—2. I had heard the attending physician, as early as February 8th or 9th, state that he believed it to be small-pox, and this to different persons. In the case occurring in the country he, from the first, cautioned them that the disease had the symptoms of small-pox.—3. Small-pox was declared epidemic February 8, 1881, and the town was proclaimed free from danger March 27, 1881. The public schools were closed for six weeks—four teachers and two hundred pupils.—4. Direct cost of attention to sick, feeding, funerals, etc., injury to trade, etc., etc., \$17,000—amounts given rather below than above the actual figures."

## GALLATIN COUNTY.

## OMAHA:

One case of varioloid occurred at Omaha, during January, 1882; origin not ascertained; had not been vaccinated for twenty years; recovered without any complications or spread of contagion. Reported cost, \$240, of which amount \$145 is constructive and estimated.

Reporter: J. H. MOORE, M. D., attending physician.

## GREENE COUNTY.

## CARROLLTON:

A negro, under treatment several days for "black measles," was finally found by Dr. Crow in the exudative stage of confluent small-pox on the 17th February, 1882, and died on the tenth day following. The man had recently arrived from Howard county, Missouri, and is supposed to have contracted the disease *en route*. The city had no board of health, but the authorities put the entire charge of matters in the hands of Dr. J. T. Crow. A hospital was erected in a secluded place, one and a half miles from the city, and to this all the inmates of the house where the case was discovered—except the patient and nurse—were at once removed. The nurse was a discharged colored soldier, who claimed to have had varioloid in New Mexico. All exposed persons were vaccinated or revaccinated. On the death of the case the house and contents, except such articles as were destroyed, were thoroughly disinfected, and the nurse was removed to the hospital, "on suspicion that he was mistaken as to his having had varioloid." The suspicion proved well-founded, as he came down with the disease about March 4. Dr. Crow says: "I believe the vaccination and revaccination of all exposed, their removal from the city and isolation, the lavish use of disinfectants, and the other instructions of the STATE BOARD OF HEALTH, all of which were scrupulously enforced, kept us from having quite an epidemic here. Our citizens are more than pleased with the result of the means adopted, in view of what might have followed from the exposure of so many unsuspecting persons to an unrecognized case of confluent small-pox. I think fully 99 per cent. of our citizens have been vaccinated or revaccinated during the winter and spring." The outbreak was limited to these two cases. Cost, \$3,950, of which amount \$2,800 is constructive and estimated.

Reporter: J. T. Crow, M. D., physician in charge.

## GREENFIELD:

A young man contracted modified small-pox "on the streets and in a billiard room at James River, Wyoming Territory," and returning to Greenfield was first seen in the febrile stage of the disease, March 29, 1883. He had been vaccinated at the age of five, with humanized virus, and presented a modified cicatrix. Discharged convalescent, April 14. The local board of health instituted very thorough precautionary measures and no spread of the disease followed.

Reporters: ABRAM TOMPKINS, M. D., F. A. STUBBLEFIELD, M. D., attending physicians; W. M. WARD, president board of health.

## GRUNDY COUNTY.

## MINOOKA:

The president of the board of village trustees, under date of March 16, 1882, reported a mild case of varioloid, taken sick twenty-four hours after arrival from Chicago. The usual precautions were observed; patient recovered; and there were no other cases.

Reporter: G. DAHLEM, president board of trustees.

## VIENNA TOWNSHIP:

A German immigrant arrived in New York, February 7, 1883, via steamer Elbe, from Bremen. Was sick on landing, and when he reached Vienna township, February 23, he "had about a half a dozen small-pox pustules on his face." After remaining in this locality three days, during which time he "roomed and slept with a preacher, who subsequently went to Morris," the immigrant went to Ottawa, where he staid one night, and thence to Chicago. Introductions of the disease directly attributable to this case, are reported from Vienna township, 7 cases and 2 deaths; Allen and Brookfield townships, La Salle county, 4 cases and 1 death; Grand Ridge, LaSalle county, 5 cases and 2 deaths; and Streator, 21 cases and 5 deaths.

Reporters: K. CLYMER, M. D., Seneca, S. W. CLARK, M. D., Ransom, W. B. Cook, M. D., Verona, attending physicians; JACKSON BUTE, supervisor Farm Ridge township.

## HAMILTON COUNTY.

## PIOPOLIS:

Between February 1 and May 10, 1883, there were some 30 cases of small-pox, with 5 deaths, at or near Piopolis and Belle Prairie. The origin of the disease is attributed to a "walking case" of varioloid, in the person of a young man visiting Piopolis from Fond du Lac, Wisconsin. The reporting physician lays much stress upon the proof, furnished during the outbreak, of the value of vaccination, and says "had the order of the STATE BOARD been complied with last winter the outbreak could have been confined to those first exposed." In the family first attacked, consisting of 7 persons, the mother of the first patient had been vaccinated in childhood in Germany; was the only one vaccinated, and the only one who escaped, although she nursed all the others. Many similar,

although not such striking instances, are adduced. One reporter notes that the fatality was governed largely by the ventilation of the rooms in which patients were treated; 4 out of the 5 deaths occurred in small and badly ventilated rooms. Total reported cost, exclusive of constructive and estimated losses, \$1,485.

Reporters: S. M. PROUDFIT, M. D., attending physician and president town council; JOHN J. BUCK, county clerk.

#### BELLE PRAIRIE:

See *Piopolis*.

#### MCLEANSBORO:

A public scholar, never vaccinated, was found, December 1, 1883, in the febrile stage of small-pox; origin unknown. From this case resulted 5 others, with one exception all unvaccinated before exposure. Of the 5 cases, 1 never vaccinated, recovered; 2 vaccinated after exposure, and 1 vaccinated both before and after exposure, recovered; and 2, never vaccinated, died. No other details (except those given in the appended Tabular Statement) have been furnished.

Reporters: C. M. LYON, M. D., attending physician; JOHN J. BUCK, county clerk.

### HANCOCK COUNTY.

#### SONORA TOWNSHIP:

About January 1, 1882, a young man, who had been attending a commercial college in Keokuk, Iowa, came to his home in Sonora township, after having visited one of the medical students "who was very ill with what was supposed, at the time, to be 'black measles.'" The student died a few days after this visit, and the next day another died. Both these students had dissected a cadaver, subsequently ascertained to be a small-pox corpse; and, as soon as this was learned, the young man with all others known to have been exposed, were vaccinated with bovine virus. Shortly after, the vaccination showing evidence of being successful, the young man came home. Twelve days after his arrival—fifteen days after exposure—he was found to be suffering from an attack of small-pox, modified by vaccination. From him, five others, all inmates of the same family, contracted the disease; but, by rigid isolation, and general vaccination throughout the neighborhood, the outbreak was confined to this household. Two other members of the family—one having had small-pox previously, and the other being successfully vaccinated as soon as the character of the disease became known—escaped the contagion. Mr. James Bolton, a justice of the peace and school treasurer, and the attending physician, Dr. Thomas Powell, seem to have taken upon themselves the labor and responsibility of enforcing all the precautionary measures adopted. Reported cost, \$145.

Reporters: THOMAS POWELL, M. D., attending physician; JAMES BOLTON, school treasurer; B. F. DUVALL, Adrian.

#### PLYMOUTH:

December 27, 1882, a man returned from Nebraska, where he had been exposed to small-pox. January 28, 1883, his mother, living near Plymouth, was found to be seriously ill, and died, February 4, of unmodified small-pox. A large number of persons in Plymouth and vicinity were exposed, and there resulted a total of 30 cases with two deaths, before the disease was finally suppressed in the latter part of April. Total cost of cases to town and individuals, \$1,420; constructive losses not stated.

Reporters: W. D. WADE, M. D., E. D. OLMSTED, M. D., attending physicians; D. E. WADE, town clerk.

### HENDERSON COUNTY.

#### SOUTH HENDERSON:

The death of one of the Keokuk, Iowa, medical students, in the country, near South Henderson, was reported by telegraph, January 10, 1882, but no details have been furnished.

### HENRY COUNTY.

#### ANNAWAN:

A farm laborer, said to have recently visited Moline, was discovered, January 22, 1882, in the exudative stage of confluent small-pox, and died on the 30th. Seven other members of the exposed family were immediately vaccinated, and all but one escaped. The exceptional case manifested a remarkable resistance to vaccine virus, but succumbed to confluent small-pox, dying February 14. (See note to case No. 403, Tabular Statement.) One other case occurred the last of March, a railroad hand employed in Iowa, where he contracted the disease; had been vaccinated, and recovered. Total cost, \$88.25.

Reporters: J. L. PRIESTMAN, M. D., attending physician; JAMES M. BICE, supervisor.

#### ORION:

A lad, employed in a livery stable in Rock Island, came to his home in Orion on the 22th of January, 1882, in the febrile stage of what proved to be a fatal attack of confluent small-pox with an hemorrhagic tendency. At the date of his arrival the other members of his family, five in number, were all suffering with sore arms, the result of recent vaccination. Although continuously exposed, and some of them engaged in burying the corpse, none of them contracted the disease. The victim had never been vaccinated, and is supposed to have become infected through handling the clothing and buggy robes of a



physician who was attending small-pox cases. A strict quarantine of the infected premises was enforced; vaccination was made general; infected material was either destroyed or thoroughly purified; and no other case followed. Total cost reported, \$628, of which \$500 is constructive.

Reporter: H. H. LONG, M. D., attending physician and member board of health.

#### GENESECO:

In February, 1882, a female arrived from Chicago at Geneseo in the eruptive stage of the disease. The usual precautions were taken with this case by the city physician and no others resulted. The following month a farmer returning from Dakota contracted the disease upon a railroad train in the territory, and introduced the contagion into his family. He recovered, but his two children, both imperfectly vaccinated one year previous, succumbed to the disease. These cases were removed to small-pox hospital, and premises quarantined, etc. No other cases resulted.

Reporters: IRA R. WELLS, M. D., city physician; W. C. BROWN, attending physician; A. M. BROWN, city clerk.

#### CAMBRIDGE:

A "walking case" of small-pox, contracted *en route* from Pennsylvania, where he had been visiting, arrived in Cambridge in the latter part of November, 1882. The case was erroneously diagnosed, and before its true nature was determined, many persons were exposed. In all there were seventeen cases, but with only one death, this latter result being due, probably, to the fact that of the total number of cases, thirteen had been successfully vaccinated and two had previously had small-pox, leaving only two unprotected; of these one died of confluent small-pox on the fourteenth day. As soon as the disease was pronounced small-pox the instructions of the STATE BOARD were fully carried out, and the outbreak subsided about the last of January, 1883.

Reporters: DR. G. W. DUNLAP, attending physician; N. B. GOULD, chairman board of health.

### IROQUOIS COUNTY.

#### WOODLAND:

During December, 1881, small-pox made its appearance in Woodland, mode of introduction not learned for some time, but finally ascertained to be by a young man from Chicago. There were in all ten cases with three deaths; duration of outbreak about six weeks. In the absence of detailed reports, the following facts are gleaned from correspondence: six of the ten persons attacked, had been vaccinated, and all recovered; three of the four unvaccinated died. There was no second group of cases, all that occurred being the result of direct exposure to the first case. In one family of five persons, the parents and two children were successfully vaccinated as soon as the remaining child showed symptoms of the disease; these four all had premonitory symptoms at about the end of the usual period of incubation, but at the end of three days were entirely well. The public school and churches were closed for four weeks. Cost of outbreak, \$314.70.

Reporters: DR. IRA BROWN, attending physician; J. G. WILLIAMS, supervisor.

#### WATSEKA:

Contagion introduced from Woodland (which see) first about the middle of December, 1881, by a man who worked there a short time and had a mild attack of unrecognized varioloid; his wife and sister contracted the disease from him. Toward the latter part of December a nurse, who had been employed at Woodland, was allowed to come to her home in Watseka, and communicated the disease to her husband and child. It is alleged that she was paid for her clothes at Woodland, but that they were not destroyed, and she brought some of them home with her. Further details, total number of cases, deaths, if any, duration of outbreak, cost, etc., have not been received.

Reporters: DR. J. O. NEAR, Watseka; DR. CHARLES TRUE, Chatsworth, attending physicians; J. N. FIELD, mayor.

#### MARTINTON TOWNSHIP:

January 19, 1882, the report of a death from small-pox, a young lady resident of Martinton township, about eight miles north of Watseka, was received by the STATE BOARD; but no details have been furnished.

#### DANFORTH:

The attending physician furnishes the following history: "The first case came from Chicago (about the first of February, 1882), and went into a family of 15 persons, 11 of whom contracted the disease in some form or other. One of these, a boarder in the family at the time the first case developed, having been but slightly exposed, was permitted to go to another house, where he developed the disease, and thereby infected the thirteenth case. We rigidly enforced all regulations suggested by the STATE BOARD OF HEALTH, and found them sufficient to prevent any spread of the disease, these two houses being the only points infected. In every case where vaccination after exposure had time to complete itself, it seemed to greatly modify the attack."

Total number of cases, 13, with 2 deaths. Duration of outbreak, 35 days. Cost, \$1,016.80—constructive and estimated, \$3,000.00.

Reporters: CHARLES F. SMITH, M. D., attending physician; ALBERT S. OLMS, town clerk; DAVID KEER, Gilman, county superintendent of schools.



## JACKSON COUNTY.

## GRAND TOWER:

A roustabout, from St. Louis, stopped at Grand Tower, May 17, 1882. Three days later was reported ill with chicken-pox. Three children out of four, belonging to the colored families who occupied the cabin where the patient was found, contracted the disease, and one died; but the other inmates, four in number, escaped through prompt and successful vaccination. Two more cases, one of which died, were caused by the first patient, who eluded the vigilance of the quarantine guards, and met a young woman clandestinely about the middle of June. Through the vigilance of the health officer, and the thoroughness of the precautions enforced, there was no further spread of the disease.

Total number of cases, 6; of deaths, 2. Duration of outbreak, two months. Cost, \$485.10.

Reporters: ENEZEZER DAY, M. D., health officer and attending physician; GEO. POST, city clerk.

## MAKANDA:

Eight days after her return from a ten days' visit in New Orleans (where she "saw yellow flags in several streets, but was not nearer any of them than in the street cars," a lady, living in Makanda, was taken ill March 9, 1883, with what proved to be a mild attack of modified small-pox. Presented two typical cicatrices, one on either arm; humanized virus; operation performed in 1865, when the patient was ten years old. "Rendered the disease so mild that the physician had only a suspicion that it was varioloid, and was laughed at for his fears and precautions." His diagnosis was so strenuously denied that a child, fifteen months old, was left unvaccinated, and on March 30th it was attacked with confluent small-pox, and died on the sixth day. The rules and regulations of the STATE BOARD OF HEALTH "were now enforced to the letter, and no other cases followed." Total cost to the family, \$160.

Reporter, F. M. AGNEW, M. D., attending physician.

## JERSEY COUNTY.

## ELSAS:

Reports from this place are meagre and wanting in details. A railroad hand contracted syphilis and small-pox simultaneously in St. Louis, and died of the latter disease, December 16, 1881. Six or seven other cases resulted from this, but all recovered. In August, 1882, the disease was again introduced, through the medium of a second-hand suit of clothes bought in St. Louis, and washed in a family living near Elsas. All the members of this family, both parents and four children, were attacked by the disease and the mother died. One other case, a railroad man, resulted from these. So far as can be ascertained, none of this latter (August) group had ever been vaccinated.

Reporter: B. F. FARLEY, M. D., attending physician.

## JERSEYVILLE:

Small pox had existed within a few miles of Jerseyville for some time without being introduced, until January 5, 1882, when a man who had recently visited St. Louis was found suffering from an attack of the confluent type; had never been vaccinated, and died on the tenth day. On the 10th January another case was discovered, "said to have originated from trading coats with a tramp from St. Louis;" had one good vaccinal cicatrix; recovered. In a short time there were several other cases, so that by the last of February there had been eight cases, three fatal, in five houses widely separated. This outbreak was finally suppressed, but on the 10th of August a case of confluent small-pox was found amongst a knot of people in front of a hotel. This man, a railroad carpenter, had recently been to St. Louis, where he bought a suit of second-hand clothes; these were washed in his brother's family, near Elsas, communicating the disease to them, and causing six cases and one death at that place. This carpenter visited his brother's family during their illness, and thus contracted the disease. Twelve days after his removal to hospital, a railroad-bridge builder was taken down, and two days after, his companion was attacked; both of these men had slept in the same room with the carpenter. None of these cases had ever been vaccinated. Total number of cases reported in the returns received, eleven, with three deaths. Cost not given.

Reporters: E. L. H. BARRY, M. D., county physician; GEORGE SUMRALL, M. D., attending physician; W. E. CARLIN, supervisor.

## JO DAVIESS COUNTY.

## GALENA:

In December, 1881, a family of five persons, mother and four children, contracted small-pox from Bellevue, Iowa, and introduced it into Galena. These were all discharged, recovered, on February 14, 1882. Meanwhile a tramp was found, January 29, in the suppurative stage of the disease, and the small-pox hospital not then being completed he was taken to the residence of this infected family, where he died six days later. Two weeks after the discharge of the first group of cases, the city market-master was attacked; origin of contagion unknown. A domestic in the family of the physician attending the first group of cases contracted the disease, and infected her sister who nursed her; neither of these patients had ever been vaccinated, and the domestic is reported to have been the only inmate of the physician's family not vaccinated. From contact with the father of these two latter patients, a mother and four children were infected, one of the children dying on the eighth day after development of the pustules, and the contagion was thence

carried into Guilford township. In all there were fourteen cases, with three deaths in Galena. Duration of contagion, twenty-five weeks. Cost, \$1,470.19; estimated and constructive losses, and losses to private individuals, not included.

Reporters: Drs. E. D. KITTOE, M. H. CLEARY, E. G. NEWHALL, attending physicians; JOHN B. FRENCH, city clerk.

#### GUILFORD TOWNSHIP:

Nine cases, with two deaths, in four families, occurred in this township between December 1, 1881, and April 25, 1882. In at least one case the contagion is known to have been introduced from Galena; but details are wanting, owing to the failure of the attending physician to respond to repeated requests for reports. The principal preventive work seems to have fallen upon the town supervisor. Total reported cost, \$330.

Reporter: HENRY BASTIAN, supervisor and chairman township board of health.

#### LONG HOLLOW:

See *Guilford Township*.

#### VINEGAR HILL:

Three mild cases of varioloid, in one family, occurred in March, 1882; source of contagion, not stated. Cost to town, \$50.

Reporter: M. McGUIRE, secretary town board of health.

#### MENOMINEE:

Twelve days before being taken sick, in April, 1882, a man passed a house in Galena, which was being disinfected after a case of small-pox. He had a mild attack of varioloid, which was communicated to his family, consisting of wife and six children. The children had all been vaccinated about four months before, four of them successfully, and two (Nos. 471 and 472, in the Tabular Statement) unsuccessfully. These latter, as also the mother, contracted the disease, but all recovered. There was no spread of the disease beyond this family. Cost not stated.

Reporter: M. H. CLEARY, M. D., Galena, attending physician.

### KANE COUNTY.

#### AURORA:

The first case of small-pox, in Aurora, during the epidemic, occurred in September, 1881; origin, Chicago. No other cases resulted from this, and the town remained free from infection until the following January, when a railroad switchman contracted the disease during a visit to Chicago, and conveyed it to his little nephew, an inmate of the same house. Two other cases occurred about the same time, in another part of the town; origin unknown.

In February, a railroad engineer died of the disease—contracted in Chicago. A printer also contracted the disease in February, presumably from tramp printers or travelling comedians. Through the nurse of this last case the contagion was conveyed to a young woman in East Aurora.

Two other cases occurred in March, 1882: a blacksmith, never vaccinated, died March 23d; source of contagion, unknown. From him, his mother, who nursed him, was inoculated through an uncared-for cut on the hand. She had been vaccinated in Ireland, during childhood, and escaped with a very mild attack, although it is noted that the febrile stage was unusually prolonged, lasting over a week; eruption very slight, and confined to head and hands.

A fourth introduction of the disease occurred in October, but was confined to the original patient. Of the 11 patients, 4 had never been vaccinated, and 2 of these died.

Notwithstanding these repeated introductions of the contagion—seven different times in thirteen months—there was only one case which occurred outside of the house or family into which the contagion was introduced. The explanation of this immunity is to be found in the following extracts from a letter of the president of the Aurora board of health: "As soon as the vaccination order of the STATE BOARD OF HEALTH was received immediate steps were taken to carry it into effect. . . . Every scholar returned these certificates [of successful vaccination] at the beginning of the present school term [January, 1881,] properly signed, with two exceptions, and these two were immediately expelled. . . . I do not think you can find a city in the State more thoroughly protected by vaccination than our own, and the people are to be commended for the ready and cheerful manner in which they have complied with the rules and regulations of the STATE BOARD."

This letter was written January 31, 1882, and the results of the "thorough protection" fully justify the confidence, then expressed, of future immunity.

Cost, constructive, estimated, and actual, \$14,220—of which amount \$10,000 is constructive and estimated.

Reporters: COURTNEY SMITH, M. D., president board of health and attending physician; F. M. ELLIOTT, M. D., and HENRY REEDER, M. D., attending physicians.

#### ELGIN:

Between the middle of October, 1881, and the 10th of July, 1882, there were seven different introductions of the disease into Elgin, from Chicago, and one from Michigan. These resulted in a total of 28 cases, with 7 deaths.

The first introduction was by a sister of charity, a teacher in St. Mary's academy, who had a mild attack of modified small-pox, contracted early in October, 1881, while nursing a small-pox patient in Chicago. From this case directly resulted six others, four among pupils of the academy never vaccinated prior to exposure; two others contracted the disease from those directly infected, making a total of 8 cases, with 3 deaths, from this first introduction, besides which the contagion was conveyed to Dundee, (which see.)

About the middle of December, the second introduction was effected, through a visit to Chicago. The attack being very mild the patient was not seen by any physician, and the facts were not learned until another group of cases was developed, 4 in number; from this group still another case resulted, making a total of 6 cases from this introduction. During this time a laborer from Chicago was found (about January 5, 1882) in the eruptive stage of the disease; was removed to hospital where he died, after infecting his nurse, who had a mild attack of modified small-pox.

January 19, a peddler from Sparta Centre, Michigan, died in the hospital, and the city was again pronounced "entirely free from the disease."

About March 25, a female tramp from Chicago was sent to the hospital in the eruptive stage; and on April 11, a woman in whose house she had been, came down with a mild attack.

The sixth introduction occurred in May; a "transient," last from Chicago, seeking work; died May 7; infected 4 inmates of the house where he was found.

May 30, a night clerk in a Chicago lodging-house, was found in Elgin, in the febrile stage; discharged convalescent, June 8, and no other cases.

The eighth and last introduction was by a Swedish immigrant; landed in New York from steamer Kai-er, May 14; arrived in Chicago, May 17, where he remained fifteen days; then went to Elgin, where he had been only a few days when attacked.

Of the total number, 27 cases, 13 had never been vaccinated before exposure; 5 of these were successfully vaccinated after exposure, and recovered; 2 of the remaining 8 died. Of the other 4 deaths, one was due to puerperal complication, miscarriage at the eighth month; one, *etat. 19*, was vaccinated in childhood, and showed a "bad" scar; one, *etat. 35*, vaccinated in childhood, result not stated; one, vaccinal history not ascertained before death. There were 5 cases of the hemorrhagic variety.

Exclusive of constructive and estimated losses, the total cost to the town and to individuals is placed at \$2,970.50. Vaccination and revaccination, isolation of cases and attendants, and thorough disinfection of clothing, premises, etc., were rigidly enforced; and to these measures is attributed the fact that there was so little spread of the disease, notwithstanding its repeated introduction.

Reporters: D. E. BURLINGAME, M. D., city physician and chairman board of health; R. F. BENNETT, M. D., C. A. JAEGER, M. D., AMELIA A. PLATT, M. D., B. TYRRELL, M. D., and JAMES E. BUMSTEAD, M. D., Dundee, attending physicians; A. L. CLARK, M. D., member STATE BOARD OF HEALTH.

#### DUNDEE:

In October, 1881, a pupil in a Catholic school in Elgin contracted the disease from one of the teachers, and was removed to her home in Dundee. From this case her sister and an attendant became infected; the sister, who was vaccinated three times, in rapid succession, after exposure, had a mild attack; but the attendant went to Chicago, was removed to the small-pox hospital, and died. None of these three cases had ever been vaccinated prior to exposure.

In March, 1882, a family removed from Chicago to Dundee, where, a few days later, the mother came down with an attack of confluent small-pox; had been vaccinated 44 years before, in Germany; recovered. No other cases followed.

Reporters: E. F. CLEVELAND, M. D., and J. E. BRUNSTEAD, M. D., attending physicians.

#### KANKAKEE COUNTY.

##### KANKAKEE:

In May, 1881, a family of Danes, immigrants direct from Copenhagen, arrived in Kankakee, and a few days after arrival three members of the family "came down with small-pox, resulting in the death of one, and serious loss in the business of the firm employing them." A similar experience "occurred to the town of Anne only a short time previous." These warnings, together with the increase of small-pox in Chicago, only a few hours distant, led the mayor of Kankakee city, toward the close of the year, to issue his proclamation calling the attention of citizens to an ordinance passed March 4th, 1874, and now in force, making it "the duty of all parents, guardians, or other persons having the custody or control of any minor, who has not been vaccinated, to cause such minor to be vaccinated therefor without delay. By the same ordinance, it is made the duty of all adult people to be vaccinated, and the health officer to see to the proper enforcement of the ordinance.

"The STATE BOARD OF HEALTH, with a view to check the spread of the disease, has issued an order requiring all children attending school, to present a certificate that they have been vaccinated, as a condition to being admitted to the school.

"Therefore, I recommend all citizens to aid the authorities in stopping the ravages of the disease, and call upon them to see that their children are vaccinated, and that adult persons be vaccinated at once. A proper observance of this ordinance, and the order of the STATE BOARD OF HEALTH, may save our city the visitation of dread disease."

These recommendations seem to have been very generally complied with; notwithstanding the threatening proximity of the contagion, only three cases of the disease, with one death, occurred in Kankakee during the remainder of the epidemic. These cases



were the result of the return of a young married woman who had been exposed in Chicago, "and came here (to Kankakee) to her parents to be sick, to avoid being sent to small-pox hospital." The mother of the young woman, and her infant, contracted the disease, the infant dying. None of these had ever been vaccinated. Cost of these three cases, \$285.25.

Reporters: B. F. URAN, M. D., and FRED OBERD, M. D., attending physicians; M. D. BUTTS, city clerk; D. C. TAYLOR, supervisor.

#### REDDICK:

About the last of December, 1881, a tramp was found in the town of Reddick, in what proved to be the last day of the febrile stage of small-pox. He was finally disposed of in hospital, but three families, in whose houses he had slept, in the towns of Round Grove, Norton and Essex, were infected, resulting in a total of nine cases. The outbreak from this source was finally suppressed March 3, 1882, at which date the patients had all been discharged convalescent, premises had been disinfected, clothing, bedding, etc., destroyed, and other necessary precautions carried out.

Reporters: L. F. GREEN, M. D., Reddick, attending physician; S. S. KIMBALL, Essex, for town board of health.

#### ST. ANNE:

See *Kankakee*.

#### ROUND GROVE:

See *Reddick*.

#### NORTON:

See *Reddick*.

#### ESSEX:

See *Reddick*.

### KENDALL COUNTY.

#### MILLBROOK:

In December, 1881, a patient, suffering with varioloid, escaped from quarantine in Chicago, and made his way to Millbrook, his home. Three generations of his family contracted the disease from him—his child, child's mother, and child's grandmother. The two latter, who had been vaccinated in childhood, escaped with mild attacks of varioloid; but the daughter, who had never been vaccinated, although 15 years of age, died on the thirtieth day of an attack of unmodified confluent small-pox. The disease was limited to these four cases. Cost to township, \$287.26.

Reporters: J. A. FREEMAN, M. D., Millington, attending physician; M. A. COSTELLO, town clerk.

#### BRISTOL:

An employé at Pullman, Cook county, contracted the disease in January, 1882, and came to Bristol to be treated. Had been vaccinated when young, and was successfully revaccinated two days after exposure. His illness was slight, and of only a few days' duration; eruption very scanty.

Reporter: J. A. FREEMAN, M. D., Millington, attending physician.

#### PLANO:

A fatal case of unmodified small-pox occurred at Plano, death ensuing February 6, 1883, on the tenth day. Source of contagion unknown. The patient, a child three years of age, had been twice vaccinated unsuccessfully with bovine virus one year previous. The remaining members of the family were at once successfully vaccinated as soon as the eruption appeared; the premises were quarantined, and the other usual precautions were adopted; so that there was no spread of the disease.

Reporters: DANIEL S. JENKS, M. D., attending physician; T. J. BEEBE, president board of health and board of trustees.

### KNOX COUNTY.

#### GALESBURG:

One case in May, and two in June, 1881, are reported in Galesburg, introduced from other places, one known to be from Chicago. A fourth case was subsequently reported, June 17—a farmer living a few miles east of the city; had been, for some weeks, in Creston, Iowa, and soon after his return was taken down with small-pox, which resulted fatally after a brief illness. No further spread of the disease. No cost or other details furnished.

Reporters: GEORGE W. FOOTE, M. D., health officer and attending physician; E. S. COOPER, JR., M. D.

### LAKE COUNTY.

#### WAUKEGAN:

The first case of small-pox, in Waukegan, was reported, December 15, 1881, contracted at a railroad boarding-house in Chicago. Up to the 23d February, 1882, there had been 24



cases, with 5 deaths. All the unvaccinated cases died; all the vaccinated recovered. Contagion repeatedly introduced from Chicago, but spread limited by general and thorough vaccination.

The Mayor of the city writes, December 30, 1830: "I will have the instructions of the BOARD, relative to the suppression of small-pox, published in our papers. Never were there so many vaccinated before in so short a time. It is already generally understood that no child will be allowed to go to school unless properly vaccinated."

The total cost of these repeated introductions to the city was \$942.85. No estimate of constructive cost, nor of cost to private individuals.

Reporters: O. T. MAXSON, M. D., attending physician; JOHN T. POWELL, mayor; J. K. BOWERS, city clerk.

#### CUBA:

One case occurred in Cuba, contracted in Chicago, during January, 1832. It is of interest as showing the necessity for revaccination after puberty. The patient, a woman 36 years old, was vaccinated in Germany, during infancy. Each arm presented a chain of typical cicatrices, six upon one and seven upon the other. Feeling secure in these numerous evidences of successful vaccination she had declined to be revaccinated. Her husband nursed her, and, together with two children, aged 5 and 7 years respectively, was confined in a small house of only two rooms for over three weeks. He had been vaccinated eight years before during the voyage to this country; was revaccinated, and the two children vaccinated, during the febrile stage of the mother's illness, and all three escaped.

Reporter: W. P. ROBERTS, M. D., Barrington, attending physician.

#### LA SALLE COUNTY.

##### NORWAY TOWNSHIP:

In January, 1831, an old Norway sailor, living in Norway or True Mission township, visited some friends in Chicago, and returned to his home with some second-hand garments. On the morning of the 22d he was found dead, and an autopsy, held the next day, revealed evidences of variolous eruption, "but not sufficient to account for his sudden death." Twelve days subsequently a woman, who had washed the second-hand clothing, was seized with confluent small-pox, and died on the eleventh day. Her husband and two children were next attacked, but recovered. This family were paupers, lived in an isolated locality, were rigidly quarantined, and there was no spread of the disease. Cost to the town, \$99.75.

Reporters: R. W. BOWER, M. D., Sheridan, C. O. COURTRIGHT, M. D., Norway, attending physicians; WRIGHT ADAMS, town supervisor.

##### SERENA:

A woman, "subject to erysipelas," contracted small-pox on an immigrant train, January 12, 1832, and died on the seventh day, of a very severe attack of the gangrenous variety. No spread of the disease. Total cost to town, \$311.

Reporters: T. W. CHASE, M. D., attending physician; H. BOWEN, supervisor; JOSIAH BAGLEY, town clerk.

##### NORTHVILLE:

A Danish immigrant, female, was found a few days after arrival, in the exudative stage of modified small-pox. It is alleged that the vessel on which she was a passenger, name not given, "was infected with small-pox, but in some way she was permitted to leave." Stringent isolative measures promptly adopted by the local board of health; all known to have been exposed were at once vaccinated; on recovery of the patient the premises were thoroughly disinfected under the supervision of a physician, and there was no spread of the disease.

Reporters: J. A. FREEMAN, M. D., Millington, Kendall county, attending physician; J. M. FOX, town supervisor.

##### MENDOTA:

In January, 1832, one case of modified small-pox occurred at this place; imported from Chicago; no spread. "Vaccination has been so universal here that the citizens think they are well fortified against the dread disease."

Reporter: E. H. COOK, M. D., attending physician.

##### OGLESBY:

Two cases of variola at Oglesby, were reported by telegram from LaSalle, February 13, 1832. Diagnosis was disputed, and the Secretary was telegraphed for to examine the cases, which he did, February 16. Origin was then ascertained to be a tramp. In the following May five cases, all confluent, were reported, with one death. Again in October another "mild case" was reported. No other details received.

Reporters: B. Z. APLINGTON, M. D., president board of health, LaSalle; JAMES E. DONOVAN, town clerk.

##### DEER PARK TOWNSHIP:

Small-pox existed at Oglesby, in January, 1832, when a young farmer, living in Deer Park township, attended a dance at the former place. After the usual period of incubation he was attacked with the disease, confluent type, and four others became infected. None of these had ever been vaccinated prior to exposure; but as soon as the character of the disease was recognized, all known to have been exposed were vaccinated, with

one exception, a laborer who refused and was attacked on the twelfth day after exposure, dying twelve days later; type of disease, hemorrhagic. Two others of those exposed had attacks of the disease, "modified" or "materially modified" by vaccination. Cost of the outbreak to the town, \$394.43; to individuals, not stated.

Reporters: F. W. BULLOCK, M. D., Vermillionville, attending physician; EDWARD C. LEWIS, supervisor, and N. C. BALEWIN, town clerk.

#### STREATOR:

A bottle-blower, from Milwaukee, *en route* for the glass-works at Ottawa, stopped one night in Chicago, March 5, 1882; on the fourteenth day following, March 19th, was taken sick with what was supposed at first to be rubeola, but three days later was pronounced small-pox. A health officer was at once appointed; the hotel in which the case occurred was quarantined, as well as all those who had visited the patient during the first three days—these being also vaccinated; a small-pox hospital was built within forty-eight hours, and the patient removed thither. No other cases occurring within fourteen days the quarantine was raised; but one week later another case developed in the same hotel. The same course was again adopted and only one more case occurred—the result of a visit to the hospital by a curious lad of seven.

The measures adopted were vigorously enforced by the health officer, but it was found impossible to secure general vaccination at this time, much opposition being manifested by the miners and others. Quarantine, isolation and disinfection served to prevent any spread from this introduction; but in the following spring the contagion was again introduced and caused, between March 28 and June 4, twenty-one cases and five deaths before the outbreak was suppressed. This introduction is attributed to the same German immigrant who spread the disease through Grundy and LaSalle counties in February and March, 1883. (See *Vienna township, Grundy county*.) As usual, the deaths were among the unvaccinated; eleven never vaccinated, five deaths. The cost of the first outbreak (1882) was \$6,251.50, of which amount \$5,500 was estimated and constructive; the cost of the 1883 outbreak \$20,563.25, (\$14,800 constructive and estimated,) aside from the loss of five productive lives.

Concerning the outbreak in the convent, reported February 14, 1881, no facts have been learned; but it seems to have been considered serious, since on that date the city authorities forbade services in the adjacent churches.

Reporter: J. H. FINLEY, M. D., health officer and attending physician.

#### OTTAWA:

A German immigrant, wife and five children, sailed from Bremen, February 22, 1882, on the steamer Hermann, of the North German Lloyds; landed in Baltimore on the 12th of March, and immediately left for Ottawa, where his brother lived, arriving in Ottawa March 16. The next day his wife had a high fever, and was delivered of a child at about the seventh month of gestation. On the 19th, seven days after leaving the Hermann, the eruption appeared, showing that the disease was contracted on board the vessel.

The contagion was again introduced into Ottawa about the middle of April, by a young woman who had lost her husband of small-pox in Iowa City about five weeks before removing to Ottawa, and about eight weeks before being attacked. The source of contagion was, doubtless, infected clothing.

Reporters: J. C. HATHAWAY, M. D., ROBERT M. McARTHUR, M. D., health officers city of Ottawa.

#### PERU:

Two brothers and a woman, German immigrants, *via* Boston, name of steamer not ascertained, arrived in Peru the latter part of May, 1882. On the 5th of June one of the men was reported to have died "suddenly," but on investigation it was found he had been ill about five days. The remaining brother and his wife were found to be suffering with the disease, the former with confluent small-pox, which terminated fatally on the sixth day; the latter with discrete small-pox, terminating in recovery. The contagion was undoubtedly contracted during the voyage, as the party had only been in this country two weeks before the death of the first case. Total cost, \$609.

Reporters: HENRY ZIPSING, M. D., attending physician and president board of health; HENRY BELLINGHAUSEN, town supervisor.

#### ALLEN TOWNSHIP:

#### BROOKFIELD TOWNSHIP:

#### FARM RIDGE TOWNSHIP:

#### RANSOM:

#### GRAND RIDGE:

#### KINSMAN:

See *Vienna Township, Grundy County*.

## LAWRENCE COUNTY.

## BIRD STATION:

A young man, resident of Bird station, returned to his home from Chicago the latter part of December, 1881. January 10th, was taken ill, but character of disease was not discovered until the eruption appeared. Meanwhile his father, mother and seven other members of the family were exposed. Of these the father claimed to have been vaccinated in childhood, forty years before; but no vaccinal scar could be found. He was repeatedly vaccinated after exposure, with bovine virus, but unsuccessfully; contracted small-pox of the confluent type, and died on the twelfth day. The mother, vaccinated in childhood, was successfully revaccinated after exposure, and had a mild attack of varioloid. A school-teacher, boarding in the family, vaccinated two years previously, was successfully revaccinated. "He also had varioloid, very mild." Of the six children, two had been vaccinated before, "but had no characteristic scar; both were successfully revaccinated and escaped entirely." The other four had never been vaccinated until after exposure; vaccination successful with all. Two escaped entirely and two had "very mild attacks of varioloid."

By rigid isolation and thorough vaccination of the entire township the disease was confined to this one family; but the alarm and excitement were so great that "business was almost totally suspended for six weeks." Actual money expenditure of township, \$200. Individual losses and expenses not stated.

Reporters: N. F. LINDSAY, M. D., attending physician; JOHN E. SMITH, town clerk.

## LIVINGSTON COUNTY.

## CHATSWORTH:

About the middle of February, 1881, a lady, resident of Watseka, Iroquois county, but visiting at Chatsworth, had "a general measly eruption on the second or third day [after the physician was called,] which, by next day, had changed to scarlatiniform, and by the third day had disappeared. But one papule appeared, which vesicated and desiccated without umbilicating or passing to pustulation. Variola was not suspected until her son was attacked." Inquiry then developed the fact that she had been attending her mother, a patient in a general hospital in Chicago. "On the day that she left [her mother] in the hospital, she passed the open door of a room in which was a sick infant; the day following, the infant was found to have small-pox, was sent to the small-pox hospital and there died."

Before the character (and origin) of the disease were thus established, two others had been infected, and from one of these two more cases resulted directly—one of these dying April 3, and the other being discharged convalescent the same day. A child, two years of age, was next attacked, being found in the incubative stage April 16, the thirteenth day after the death of the fifth case, but no connection between this and the previous cases was directly established.

From this latter case seven others resulted, making a total of 14 cases with 3 deaths; first case, February 14th, last case discharged convalescent, May 20.

Of the total number of cases, seven were among public scholars, none of whom had been vaccinated. Only 3 of the 14 cases had ever been vaccinated, and these were adults vaccinated in childhood and not since, until after exposure.

Total reported cost; \$1,525—constructive and estimated losses not stated. Two schools, with 7 teachers and 259 pupils, were closed for five days.

Reporter: CHARLES TRUE, M. D., attending physician.

## OCOYA:

Between January 1 and April 20, 1882, there were five cases of small-pox in Eppard's Point township. Three of the five cases were unvaccinated, and of these two died. Cost, exclusive of constructive and estimated losses, \$563.50. No other facts furnished.

Reporters: HENRY J. FRANTZ, N. J. MYER, supervisors Eppard's Point township.

## EPPARD'S POINT TOWNSHIP:

See *Ocoya*.

## DWIGHT:

A young Dane, employed as a railroad construction hand, died and was buried about the 2d or 3d of January, 1882, without the character of his disease being clearly made out, although suspected. An unknown number of his country people attended the funeral, and after the usual period of incubation, two cases of small-pox were discovered among these. It was subsequently learned that the Danish minister who officiated at the funeral was also taken with severe pain in the back and head about ten days after the funeral; but after two days' confinement these symptoms passed off.

Owing to some uncertainty as to the diagnosis, the president of the board of trustees telegraphed the STATE BOARD to send an expert to decide; and, subsequently, an attending physician was also furnished by the BOARD. Only one other case occurred after matters were taken charge of by the latter. The rules of the BOARD were thoroughly enforced; the remaining members of the infected families, the school children, and residents of Dwight and surrounding country were vaccinated, and by January 20th, all danger had subsided.

Reporters: GEORGE N. KREIDER, M. D., Springfield, and C. D. CHALFANT, M. D., attending physicians.



## SANNEMIN TOWNSHIP:

A case of small-pox, origin not stated, was reported, January 25, 1882, at "a little village called Eyler, in the town of Sannemin; man doing well; place quarantined and rules of STATE BOARD OF HEALTH enforced; three other people living in same house." Nothing else has been learned of this outbreak, except that, in the return of the town clerk as to cost, it is stated that there were 4 cases in all, no deaths, at a total cost of \$135.

Reporters: T. SPAFFORD, supervisor; G. D. PADDOCK, town clerk.

## - ROUND GROVE TOWNSHIP:

Two adults and a child, living near Round Grove, in the township of same name, were infected by "a tramp," in January, 1882. Four others were exposed, but by prompt and successful vaccination after exposure, escaped. Attempts at vaccination after exposure in the former cases were unsuccessful. All, however, recovered. No other facts furnished, and these have been gleaned from incidental mention in other reports.

## NEVADA TOWNSHIP:

April 14, 1882, a telegram was received announcing that small-pox had "broken out in Nevada township, among a company of Norwegian immigrants, who arrived two weeks ago," and calling upon the STATE BOARD for prompt interference in the matter. Neighboring towns became much excited, and wild rumors of the rapid spread and fatal character of the disease were soon rife.

Inquiry revealed the fact that two Norwegian women, who arrived at Philadelphia via Liverpool, during the latter part of March, were sick with small-pox in a house where there were 12 or 13 other inmates. These patients were at once isolated, the other occupants being removed to a building which was erected as speedily as possible for that purpose. Thorough cleanliness and a liberal use of antiseptics and disinfectants were resorted to, and all exposed were vaccinated with bovine virus every second day for a week or more, seven of those so treated resulting in typical vaccinia.

The first two cases died, but only one other mild case of varioloid resulted among those exposed, and all danger was at an end May 15. Total cost, actual, to town and individuals, \$538.

Reporters: C. B. ALFORD, M. D., Odell, attending physician; AUSTIN GIBBONS, Nevada, supervisor.

## CHARLOTTE TOWNSHIP:

A case of small-pox was reported, April 24, 1882, by the president of the board of health of Charlotte township, but no further information has been received.

## PONTIAC:

January 29, 1883, the attending physician reported the first case of small-pox at Pontiac during the epidemic. A carpenter recently from Streator, but who, previously, had been in Chicago, was taken ill nine days after his arrival at Pontiac, and died on the seventh day of confluent small-pox. He exhibited one small cicatrix, the result of vaccination when a child, some 48 years previous; revaccination, attempted in 1869, proved a failure, and the operation was not repeated. Rigid isolation of the case was at once secured; all exposed persons were revaccinated, although vaccination had been very generally enforced during the previous winter; a thorough inspection of the public schools was again ordered by the local board of health, and no other case followed. The individual cost of the case was \$295.25.

Reporter: JOHN J. STITES, M. D., health commissioner and attending physician.

## LOGAN COUNTY.

## EAST LINCOLN TOWNSHIP:

A mild case of varioloid, in October, 1881, origin unknown, recovered without medical attendance and without the true character of the disease being detected, gave rise to thirty-eight cases and eight deaths, during November and December, in East Lincoln, Etta and West Lincoln townships. A hired man in the family first infected, became ill and went to his home near Odin, Marion county, during the febrile stage, traveling by rail. So far as has been learned no one was infected by him during his journey; but five other cases resulted in his family in Marion county (which see.)

Owing to the failure to detect the first case, and consequent ignorance as to the true nature of the illness which followed in the family in East Lincoln, a large number of persons were exposed, and much excitement followed when the disease was pronounced to be small-pox. The Secretary of the BOARD was telegraphed for, and found it necessary to make two visits in person to the county seat, where the supervisors of the infected townships were met and a plan of coöperative action was agreed upon. Large numbers of the BOARD's circular, Concerning the Suppression of Small-Pox (in both English and German) were supplied; vaccine virus was furnished, and vaccination was made general throughout the infected and exposed region.

The usual result followed these measures, and on December 21, the mayor of Lincoln advised the BOARD that the disease was "about closed out in the nine infected families in the county."

Meanwhile, however, a case of varioloid, contracted in Chicago, had appeared in Lincoln, the county seat; but vaccination had been so thoroughly enforced, that no spread of the disease resulted from this case.



The last case of the outbreak in the surrounding townships was reported from Hartsburg, January 5, 1882; but on January 11, a tramp was found in the eruptive stage of the disease, concealed in a schoolhouse in the country, about seven miles southeast of Lincoln.

In April following, a German family of immigrants arrived in West Lincoln township (near Burtonview,) and on the 11th of that month one of them was found in the febrile stage of what proved to be a well-marked case of confluent small-pox. On inquiry it was ascertained that the patient's wife had had a mild attack of varioloid soon after landing, contracted on shipboard. Both these patients had been successfully vaccinated in infancy, and unsuccessfully at the Baltimore quarantine on arrival. No other cases resulted from these.

The total cost of the outbreak is reported at \$30,000, of which amount \$20,000 is constructive and estimated.

Reporters: A. M. MILLER, M. D., C. H. NORRED, M. D., Lincoln, attending physicians; D. H. HARTS, mayor of Lincoln; H. L. PIERCE, supervisor West Lincoln township.

WEST LINCOLN TOWNSHIP:

ETNA TOWNSHIP:

HARTSBURG:

LINCOLN:

BURTONVIEW:

See East Lincoln Township.

## M'DONOUGH COUNTY.

COLCHESTER:

Two students from the College of Physicians and Surgeons at Keokuk, Iowa, returned to their homes in Colchester, just before Christmas, 1881. A few days thereafter one of them had a mild attack of varioloid from which he recovered after a short illness. Meanwhile a large number of persons were exposed to him, and in about the usual period the first crop of cases began to appear.

Owing to some dispute as to the character of the disease, and a professional utterance to the effect that "varioloid is not contagious," no steps were taken to prevent the spread of the contagion until after the middle of January. In all there were, between December 24, 1881, and March 17, 1882, a total of 32 cases and 4 deaths—the deaths occurring among 14 unprotected individuals. Neighboring towns quarantined rigidly; there was much excitement and ill-feeling; and it, finally, became necessary for the Secretary of the BOARD to visit the locality personally. The total cost is put at \$4,600.86; of which sum \$2,600 is constructive and estimated.

Reporters: B. F. JOHNSON, M. D., W. H. WEIR, M. D., attending physicians; S. T. MOORE, president town board.

MCHEHRY:

In the early part of January, 1882, a young man, who had had small-pox in Chicago, came to his home in McHenry, not fully recovered. The family physician, anticipating his return, visited the family the next day and vaccinated four unprotected children with humanized virus. It was successful in three cases, but failed on the fourth, who subsequently had a severe attack of unmodified small-pox. No other cases resulted from this, but toward the last of January another case appeared in the village; origin unknown.

Again, about the middle of February, the disease was introduced from a Hinsdale case, the patient, a young man, returning to his sister's house in McHenry, where he was nursed. In this house were also four unvaccinated children, but they, together with their mother (previously vaccinated in childhood), were vaccinated by the family physician on his first visit. The operation was successful in all five cases, and there was no spread of the disease from this case. The reporter adds, "I have treated in the last fifteen years, in this town and village, some 20 cases of small-pox, all coming from Chicago."

Total cost of the three cases, \$263.

Reporter: O. J. HOWARD, M. D., attending physician.

CHEMUNG TOWNSHIP:

During the latter part of April, 1882, a small-pox convalescent from the Chicago hospital visited some relatives in Chemung township, and soon thereafter the disease made its appearance in the family, causing a total of 10 cases and 3 deaths. The outbreak was confined to this one family, and no details of cost are given. The father vaccinated himself and family with humanized virus. Of 6 cases, in which the results are given, all un-successful, 3 died, and 1 suffered the loss of one eye and serious injury of the other. Only one member, of what appears to have been a family of eleven persons, is mentioned as being successfully vaccinated after exposure—a lad, seven years old, "took from his father's vaccination and sailed through the whole thing unscathed."

Reporter: A. C. BINGHAM, M. D., Harvard, attending physician.

## GRAFTON:

A young lady from Canada, school teacher by occupation, contracted small-pox in Chicago about four months after her arrival. She was treated at Grafton, where she died, November 22, 1881, on the eighteenth day of an attack of the hemorrhagic type. "Was vaccinated in Chicago just previous to attack, resulting in a large unhealthy sore which discharged freely when patient was taken sick, and never healed up."

Reporter: A. J. C. SAUNIER, M. D., Ivanhoe, attending physician.

## M'LEAN COUNTY.

## MONEY CREEK TOWNSHIP:

About the first of March, 1881, small-pox appeared in this township, source unknown, and in a short time had spread to such an extent and created so much alarm and excitement that the STATE BOARD OF HEALTH was appealed to. After a personal visit by the Secretary, the following circular letter, with copies of the rules and regulations of the BOARD, was addressed to the supervisors of Money Creek, Gridley and Lexington townships:

In view of the fact that small-pox prevails in the townships of Money Creek and Gridley, McLean county, Illinois, attention is called to the enclosed rules to prevent the spread of the same. You, as president of the board of health, are hereby directed to see that they are rigidly enforced. In addition it is the duty of the board to see that all persons are vaccinated and revaccinated, and houses in which cases occur are quarantined. In families that have been exposed, unless they submit to vaccination and revaccination, treat them as if they had small-pox. It is also important that the public schools should be inspected, and if not recently vaccinated, revaccinate them at once. Allow none to attend school who have not been vaccinated.

By order of the ILLINOIS STATE BOARD OF HEALTH.

JOHN H. RAUCH, *Secretary*.

On March 30, in accordance with a suggestion of the Secretary, who had found it necessary to again visit the infected locality, the town boards met in joint session and took the necessary steps looking to co-operation and concert of action in enforcing the rules and regulations of the BOARD, and three weeks later the disease had entirely disappeared. During this period, namely, from March 5 to April 20, there were a total of 19 cases, with 4 deaths. Such details as have been furnished are included in the subjoined Tabular Statement. Total cost reported, \$1,185.

Reporters: C. S. ELDER, M. D., Lexington, attending physician; JOSIAH BIGGS, town supervisor; JOSEPH M. WEAKLEY, town clerk.

## IRELAND'S GROVE:

While the Money Creek township outbreak was at its height (March—April, 1881,) a young lady, resident of Canton, Fulton county, was "snowed in" for some days between Canton and Pekin, while *en route* for Ireland's Grove, about 5 miles east of Bloomington. Soon after her arrival she had an attack of modified small-pox, but recovered, and without any spread of the disease. The source of the contagion was supposed to be a man on the snow-bound train, near whom the young lady sat, and who was noticed to be suffering from an eruption of some sort, but without any suspicion of small-pox.

## TOWANDA:

A mother and daughter were taken sick at their home in Towanda, in January, 1882, soon after returning from a visit to Pittsburg, Pa. While at the latter place, were guests of a family some members of which were being treated for "malarial fever." The husband and one other daughter contracted the disease from the first mentioned, the second daughter dying on the fourteenth day of hemorrhagic small-pox. Some six weeks after the return of the mother and daughter it was learned that some of the Pittsburg family had died of small-pox. (See Bloomington.) There were no other cases in Towanda. Cost of outbreak, \$255.

Reporter: W. C. GIRTIN, M. D., attending physician.

## LEROY:

January 23, 1882, a case of modified small-pox was discovered at LeRoy; origin attributed to a tramp; patient recovered; no other cases.

## MCLEAN:

A son of the reporter and attending physician at McLean is thought to have contracted small-pox from some tramps passing through the village during the month of January, 1882. One other case, presumed to be from the same source, also occurred a few miles north of McLean. No other details furnished.

Reporter: C. M. NOBLE, M. D., attending physician.

## SHIRLEY:

A farmer, living one and a half miles south of Shirley, contracted a mild attack of varioloid from a tramp in the latter part of January, 1882. No other cases followed.

Reporters: L. E. SPEAR, M. D., attending physician; LAFAYETTE FUNK, town supervisor.

**LACEY:**

There was one case of "mild varioloid" reported at Lacey, January 25, 1882. No details furnished.

**BLOOMINGTON:**

A tramp from Chicago *via* Bralldwood, Joliet, Odell and Chenoa, was discovered to be in the eruptive stage of modified small-pox the next day after his arrival in Bloomington, in the latter part of January, 1882. All known to have been exposed to him were at once vaccinated and placed under surveillance; and the patient was removed to hospital.

Three other cases occurred in the city within the next three weeks, concerning the origin of which the following narrative has been furnished: A young man from Benjaminsville went to Pennsylvania to seek a wife. About a week after the wedding she took sick and broke out with a disorder, which the doctor said was "malarial fever," and the husband nursed his young wife through till she got well. Then he took sick, and went through the same experience. Then an inmate of the house, a friend of the young couple, was taken down with it. When well enough to travel and on the point of starting for Illinois, one of the ladies told the doctor that it was singular they should all be sick and break out, but he assured her that he had other "fever patients" who had eruptions much worse than theirs. When she suggested that the train-men might not be willing that they should ride on the cars, he offered to furnish a certificate of their recovery from "malarial fever," and did so. One of the children was sick during the journey, and after arriving at Towanda was found to be suffering from small-pox. The two families stopped in Bloomington a day or two, and a large number of persons were exposed; all such were promptly vaccinated, and only the three cases referred to resulted.

February 23, a tramp, from Kansas City *via* St. Louis and Springfield, was found suffering with small-pox after being in the city two nights and one day. No other cases are reported to have followed this.

Other cases were subsequently reported in the public press, but no details have been furnished this office, with the exception of a postal card of April 25, 1883, requesting the BOARD to "send some fresh virus," on account of a German immigrant (female) who left Hamburg March 27, and arrived in Bloomington April 23, and the following day was found in the eruptive stage; had been vaccinated unsuccessfully on ship-board. A large number of persons had been exposed before the character of the disease was recognized, but nothing further has been learned of the matter.

Reporters: JESU LITTLE, M. D., attending physician; SAMUEL W. WADDLE, city clerk.

**CROPSEY:**

A small-pox convalescent from Chicago, resident at Cropsey, is supposed to have been the source of contagion at this latter place. Between February 1 and May 1, 1882, there were, in all, eight cases—all recovered. Total cost, \$181.44.

Reporters: C. E. HAYWARD, M. D., attending physician; H. L. TERPENING, town supervisor.

**ANCHOR:**

During the early part of March, 1882, a young lady visited the neighboring town of Cropsey where small-pox existed. March 30, after her return, she was found in the febrile stage of the disease and from this case three others resulted. Total cost, \$425.

Reporters: J. W. HOWARD, M. D., Anchor, C. E. HAYWARD, M. D., attending physicians; WM. B. PIERCE, town supervisor.

**CHENOA:**

Five cases and two deaths are reported from this town, in March, 1882; but no details have been furnished.

**MT. HOPE TOWNSHIP:**

April 27, 1882, a newly-arrived German immigrant was found in a farmer's family in Mt. Hope township, near Armington, suffering with modified small-pox. Sixteen persons had been exposed, but were at once vaccinated, and escaped. There was one case of small-pox on the vessel on which the immigrant arrived; was discovered two days before landing, when all on board were at once vaccinated, but too late to prevent other cases developing. No further details have been received.

Reporter: J. L. LOWRIE, M. D., Armington, attending physician.

**GRIDLEY TOWNSHIP:****LEXINGTON TOWNSHIP:**

See *Money Creek Township*.

**BENJAMINSVILLE:**

See *Bloomington*.

**MACON COUNTY.****DECATUR:**

In May, 1881, a railroad brakeman on the Wabash road was found in the eruptive stage of unmodified small-pox; had been under treatment by a "cancer doctor" for about a week

\*Not registered; exempt from the provisions of the Medical Practice Act by reason of length of practice.



for "scrofula in the blood." Although preventive measures were at once enforced by the local board of health as soon as the case was discovered, four other cases resulted from this one.

Again, in September another railway employé was found in a large boarding house, under treatment by the same "cancer doctor," who had been giving him medicine for four days "to bring out the scrofula in his blood." He was in the beginning of the pustular stage when found by the board, and was at once removed to the eruptive hospital, and vaccination was thoroughly enforced. Although the building contained some sixty day and regular boarders they all escaped, owing, it is believed, to the measures adopted, which, in addition to the vaccination, consisted of removing bedding, clothing, etc., to the hospital for disinfection, and the thorough fumigation of the whole house with sulphurous-acid gas.

In March, 1882, a resident of the neighboring town of Elwin was found in Decatur suffering with unmodified small-pox, contracted at Macon from a tramp. (See Macon.) He was removed to hospital and recovered; but his nurse contracted the disease from him, coming down on the twelfth day. This patient (the nurse) was a man nearly sixty years of age; vaccinated when seven or eight years old; result, "modified," by one reporter—"typical," by another; in 1859, contracted varioloid near St. Louis, and infected nine others. Had nursed twenty-seven cases of small-pox in past twenty years; but on the twelfth day of nursing this Elwin case was again attacked, the disease running a well-marked, characteristic course, complicated with facial erysipelas.

In the latter part of April, 1882, the last case occurred in the person of the niece of the proprietor of a railway hotel. She had been visiting in Michigan and at Champaign, so that the origin of the contagion is uncertain.

Total cost of the outbreak in 1881 is put at \$2,250; constructive cost not estimated. Cost of remaining three cases, not given.

Reporters: S. J. BUMSTEAD, M. D., C. CHENOWETH, M. D., Decatur board of health; Drs. MOORE and BARNES, attending physicians; H. J. WEYL, M. D., county physician.

#### MACON:

About the middle of February, 1882, a "tramp," convalescent from small-pox in St. Louis, arrived in Macon, and four persons, who were at a drug store in which the tramp applied for assistance, made up a sum of money for him to defray his expenses at the hotel. All these four subsequently came down with small-pox, and from them resulted a total of forty-eight cases with twelve deaths, in Macon, Elwin and Milam townships (Macon county,) and Penn and Moweaqua townships (Shelby county.)

This outbreak was characterized by a most instructive illustration of the protective power of vaccination. Every reporter repeats that all patients who had been vaccinated recovered, while all those who had never been vaccinated without exception died. For example: the supervisor of Macon township reports one family of eleven persons, all unvaccinated until after exposure to one of their number, who contracted the disease directly from the tramp. This one died, unvaccinated, of confluent small-pox; the remaining ten members of the family were vaccinated, all successfully; seven had mild attacks of varioloid and recovered; the three others escaped entirely. In another family in Penn township (Shelby county,) the father contracted the disease first and infected his wife and three children. None of the five had ever been vaccinated until after exposure. With the father, mother and two children the operation was unsuccessful, and all died of confluent small-pox. A little boy, the remaining case, was successfully vaccinated at the same time with the others, had a mild case of varioloid, and is the sole surviving member of the family.

Another reporter, who attended sixteen cases in Penn and Moweaqua townships, writes:

"The points of interest worthy of note in this small-pox epidemic in Macon and Shelby counties are:

- "1st. All those cases that were not vaccinated, or left entirely unprotected, died.
- "2d. Those cases that were inoculated thirty and forty years ago still contracted the disease, one having a very mild, the other quite a severe, attack.
- "3rd. All those cases which were well (or rather perfectly) protected—whether vaccinated quite recently or 10, 20, 30, 45, or 55 years ago,—recovered, as the reports of the different cases show.

"4th. If there was ever a doubt as to the protective value of vaccination and the urgent necessity of a law to make it compulsory, it should now be dispelled."

Still another says: "I subsequently saw nineteen other cases, seven of small-pox and twelve of varioloid. All of the former died, while all of the latter recovered. Every unvaccinated person who contracted the disease died; but four who were vaccinated [only] after exposure, had discrete small-pox and recovered."

(See Notes to Nos. 643-662, inclusive, in Tabular Statement.)

As nearly as can be gathered from the reports received, there were 22 cases with six deaths in Penn township; six cases with three deaths in Moweaqua township; eleven cases and two deaths in Macon and Macon township; four cases with one death in Milam township, and five cases in Elwin; besides a case, from this latter place, which was treated in the Decatur hospital. This last mentioned case was one of the four originally infected by the tramp at Macon, and he infected his nurse in the Decatur hospital and the five cases which occurred at Elwin.

The cost has been received only from Penn township, \$1,184.28, and Macon, \$501.50.



Reporters: DAVID T. KINER, M. D., WILLIAM J. HUFF, M. D., WILLIAM H. SPARLING, M. D., MOWAQUA, and JOSEPH LESLIE, M. D., Elwin, attending physicians; H. B. THOMPSON, Prairie Home, supervisor Penn township; CHARLES A. TURNER, Macon, supervisor Macon township; GEORGE CONNARD, Elwin, town clerk South Wheatland township.

ELWIN:

See *Macon*.

#### MACOUPIN COUNTY.

##### HONEY POINT TOWNSHIP:

A family from this township visited Litchfield, four miles east, in January, 1882; one of the children contracted the disease during this visit, and three other members of the family subsequently contracted the disease from this child. The house was naturally isolated, and neighbors were warned off by the yellow flag. Disease was mild in all the cases except the third one (No. 680, Tabular Statement) never vaccinated before exposure. Case No. 679, who had previously had an attack of small-pox, continued to milk from one to three cows through eight days of cold and stormy weather; "had only about half a dozen pustules on face and head, and a very few on body and extremities." Total, four cases; no deaths. Cost not stated.

February 1, 1883, the disease was again introduced into the township from Paducah, Kentucky, causing one case of unmodified, and three cases of modified small-pox; but the outbreak was speedily suppressed, and no deaths resulted.

Reporters: Drs. D. C. WALLACE and J. F. BLACKWELDER, Litchfield, attending physicians.

#### MADISON COUNTY.

##### GODFREY:

Mr. James Squire, principal of the public school, reports one family, four members, afflicted with small-pox at Godfrey, during the winter of 1881-82. He "had all children living near the family remain away from school until properly vaccinated, and had all other children immediately vaccinated at the school-house." He adds that "the school board acted wisely and timely, and thus confined the scourge." No deaths are reported and no cost stated.

Reporter: JAMES SQUIRE, principal of public school.

##### NAMEOKI TOWNSHIP:

A resident in the "American Bottom," six miles from Collinsville, contracted the disease in St. Louis, in March, 1882, and through him two children had mild attacks of varioloid. The first case had been vaccinated in St. Louis one month prior to his attack, and when first seen had a recent modified cicatrix. Disinfection of premises, vaccination of all exposed, and other precautionary measures were enforced, and no further spread of the disease resulted. Total cost, as reported, was \$230.

Reporters: CHARLES R. OATMAN, M. D., of Collinsville, attending physician; PHILIP BRADEN, of Nameoki, supervisor.

##### ALTON AND NORTH ALTON:

Notwithstanding its proximity to a number of infected points, only one case is reported from Alton in 1882. About the middle of May, 1882, a recent arrival from Cincinnati was found in the eruptive stage of the disease, confluent type. He was immediately removed to the small-pox hospital, where he died on the 16th of May. The room in which he was found was thoroughly disinfected, and all necessary precautions were promptly enforced by the local board of health.

No other cases ensued in the city; but on the 17th, the disease appeared in a family in North Alton, five members of which were attacked and one (a girl, *æt* 7 years,) died. No connection was traced between these and the Alton case, and no other information has been received.

In the early part of December, 1883, another case, contracted in St. Louis, was found in a boarding-house in Alton. Through an unfortunate error in diagnosis he had been left there for eleven days without any precautions whatever having been taken to prevent the spread of the disease. In conjunction with the city health board, the attending physician when called had him at once removed to the small-pox hospital, and the house and all its inmates carefully disinfected. All who had been exposed, and they were many, were vaccinated, and every precaution taken to stop the disease. The patient died on the sixteenth day of purpura variolosa. Only one other case resulted, one of the nurses, vaccinated in childhood, but not successfully revaccinated until after nearly two weeks' continuous exposure.

Reporters: W. A. HASKELL, M. D., attending physician, Alton; FRANK WORDEN, M. D., attending physician, North Alton.

##### HIGHLAND:

A case of modified variola in an infant, arrived from St. Louis nine days previously, was reported June 13, 1883. Result of case not stated. Quarantine, isolation, vaccination, and "all other precautions applicable to the place" were taken.

Reporter: E. P. RAAB, M. D., secretary board of health.

## MARION COUNTY.

## ODIN:

In the early part of November, 1881, a young man, who had been at work on a farm near Lincoln, Logan county, became ill and traveled by rail from the latter town to Odin. The morning after his arrival he was found in the eruptive stage of small-pox, which proved to be of the hemorrhagic type, and terminated fatally on the fourth day following. The usual precautions were faithfully enforced—vaccination of all exposed, and the family completely isolated. Five other cases resulted, all in this family, but the contagion did not spread. The cost is stated at \$160.

Reporter: J. J. FYKE, M. D., attending physician.

## MASON COUNTY.

## TOPEKA:

A newly-arrived German immigrant, *via* steamer Weser from Bremen, landed in New York, May 30, 1881, and left the next day for his son's family near Topeka in Quiver township. Eight days after arrival complained of being ill, and three days after—being the eleventh day after his arrival in Illinois—an eruption displayed itself. This, however, was not recognized as small-pox, and no physician was called. Unrestricted intercourse with the family continued, and in a fortnight after appearance of the eruption the family physician found the son and wife suffering from varioloid, two children with unmodified small-pox and three others in the initial fever with first reddening of the skin. Complete non-intercourse quarantine, vaccination and other precautionary measures were at once enforced, and no other cases followed from these.

A painter, however, employed at this place, contracted the disease from the immigrant, and conveyed the contagion to his home, near Bishop's station, in the adjoining township of Forest City. His wife and three children, none of them vaccinated, became infected, but being successfully vaccinated on the fourth day after exposure, the attacks were very mild, all being discharged convalescent in ten to sixteen days after being taken ill. The painter's case proved more severe, the disease assuming the confluent form and duration of illness being prolonged to nearly one month. No details of cost have been furnished.

Reporters: JOHN MARENBERG, M. D., of Havana, and A. L. DARLING, M. D., of Topeka, attending physicians; J. W. DOWNEY, M. D., of Topeka.

## QUIVER TOWNSHIP:

See *Topeka*.

## FOREST CITY TOWNSHIP:

See *Topeka*.

## BISHOP'S STATION:

See *Topeka*.

## HAVANA:

About the middle of February, 1882, considerable excitement was caused in Havana by the action of the authorities of Jacksonville, who shipped back to the former place an alleged small-pox convalescent, and telegraphed the STATE BOARD OF HEALTH to take cognizance of the matter. Inquiry finally elicited that the man contracted small-pox in the latter part of January: left that city for Bloomington, where he was admitted to the small-pox hospital on the 29th of January, and was discharged, "convalescent," February 14. Examination of his person on the 18th of February, after he was returned from Jacksonville, showed, according to the report made to the BOARD, "on face, typical scab and suppurating surface; on back, breast and abdomen, marks of very recent desquamation of eruption; extremities clean, except right ankle, which has one inflamed and suppurating sore, caused by the irritation of an unmaturing pustule. Was a little feverish at the time of examination, due, probably, to the excitement and exposure of the preceding few days."

Upon the report of this physician, and his advice to the local health authorities—that, while there was "not a great deal of danger of the disease spreading from this case, yet, under favorable conditions and close proximity, the disease might be communicated by him"—the man was placed upon a boat anchored in the lake, furnished with an attendant, and thus kept in quarantine until March 1, when all danger was pronounced at an end, and he was discharged.

Reporters: P. L. DIEFFENBACHER, M. D., examining physician; J. B. PAUL, M. D.; J. B. McCONAUGHY, M. D.; W. S. DRAY, mayor; O. H. HARPHAM, chairman board of health; J. PIPKIN, supervisor.

## MASSAC COUNTY.

## PELLONIA:

March 7, 1883, a case of confluent small-pox, contracted in Paducah, Ky., was reported from Pellonia. March 20, the attending physician writes: "A general compliance with the order of the STATE BOARD OF HEALTH has, no doubt, saved us from a fearful small-pox scourge. Our threatened invasion from Paducah, which is full of the disease in a very fatal form, has apparently aborted, though I continue to vaccinate and revaccinate all who have been exposed. The sister of the young man first attacked is our only other victim. Both died on the fourth day, and neither had ever been properly vaccinated."

Reporter: J. D. YOUNG, M. D., attending physician.

## MENARD COUNTY.

## ATHENS:

The "holiness preacher," to whom was due the introduction of the disease into Springfield, in 1881, reached his home near Athens, on the 9th of January, 1882, in the beginning of the suppurative stage. Traveling by rail from Springfield he had necessarily exposed numbers of persons; but so far as has been learned the only ones infected were the members of his own family, wife, two children and a cousin. None of these had ever been vaccinated. The preacher's case was a very severe one, reported as "confluent-hemorrhagic." His wife and children were successfully vaccinated on the second day after exposure, and escaped with very mild attacks. Attempted vaccination of the cousin, on the third day, failed, and he had a well-marked attack of confluent small-pox, unmodified.

Vaccination and revaccination were generally enforced in Athens and the surrounding neighborhood, and the usual precautions were enforced with reference to the infected family and premises. At the suggestion of the STATE BOARD the railway car, in which the preacher traveled from Springfield to Athens, was withdrawn from service and thoroughly disinfected before being again used.

The actual cost of the five cases is placed at \$435, and the estimated and constructive losses at \$5,300.

Reporters: C. V. MASSEY, M. D., Athens, attending physician; CHAS. A. REED, M. D., Athens; J. D. WHITLEY, M. D., and J. M. NEWCOMER, M. D., Petersburg; A. A. RANKIN, Athens, president town board; ANSON THOMPSON, Petersburg, county clerk.

## MERCER COUNTY.

## SWEDONA:

One of the medical students from Keokuk, Iowa, returned to his home at Swedona (Richland Grove township,) December 20, 1881; was taken ill on the 24th; an eruption, not recognized as small-pox, appeared on the 27th; and he died on the morning of the 31st, profuse hemorrhages from the kidneys, lungs and mouth attending his illness throughout.

Owing to the failure to recognize the character of the disease until after death a large number of persons were exposed, and among these resulted eleven more cases in the village and vicinity. "Most of these proved to be very mild, except two who had not been successfully vaccinated, and one of these died January 22, 1882."

A board of health was appointed after the death of the first case, "immediately after which the regulations of the STATE BOARD OF HEALTH, as given in Order No. 53, were rigidly observed, and the contagion was confined to the families first affected."

Reporters: OSCAR CHINDGREN, secretary board of health; R. J. HUGHES, Cable, town clerk.

## NEW WINDSOR:

A medical student from Keokuk, Iowa, died at his home, near New Windsor, January 2, 1882; but no report of the case was made to the STATE BOARD.

## CABLE:

The source of contagion at this place was directly traced to the neighboring village of Swedona, where one of the medical students from Keokuk died of small-pox during the latter part of December, 1881. Parties from this student's death-bed—the nature of his disease not having been recognized—and including the undertaker who conducted the funeral and himself a resident of Cable, visited a family in Cable the next day, and, in a fortnight after, the first cases appeared in this family, comprising three children, who were at home during the visit. In a fortnight thereafter two of the three other children, who were absent from the house at the time of the visit, also exhibited initial symptoms. The remaining child was the only one of the number who had ever been successfully vaccinated, and she escaped entirely.

The alarm created by these two groups and others which soon followed, coupled with the spread of the disease at neighboring points, led to strict quarantine being established within the town itself, and by other places against Cable. The first supply of virus used at the beginning of the outbreak, proved to be inert, and much valuable time was lost thereby. The situation appeared so grave to the authorities and citizens that they appealed to the STATE BOARD OF HEALTH, and finally the Secretary personally visited that, and adjoining towns. Compulsory vaccination was enforced, and other precautionary measures adopted, after which the disease subsided—the last case being discharged convalescent March 10.

The outbreak lasted about two months, during which there were 17 cases and 3 deaths. Cost not given.

Reporters: A. L. WRAY, M. D., attending physician; F. VON ACH, village clerk.

*Suit Against the Village Board of Health.*

In carrying out its provisions for the suppression of the disease, the village board of health found it necessary to confine to his own premises one of the citizens whose family had been exposed to the contagion through one of its members visiting an infected house. For this action the citizen brought suit against the board, claiming \$10,000 damages for false imprisonment. The plaintiff was defeated on the trial in the Mercer County Circuit Court, and at once appealed from the judgment. At the May, 1883, term of the Appellate Court of the Second District, the judgment was affirmed.



The following brief and argument of the Attorney-General, James McCartney, are here reproduced, as furnishing, in a forcible and lucid manner, much valuable and timely information to sanitary officers and health boards:

*Brief and Argument—Ellis vs. Von Ach et al.*—Upon and previous to the third day of February, 1882, the plaintiff, Richard B. Ellis, operated a coal mine at Cable, Illinois, employing some 30 or 40 hands. Cable is a village of some 600 inhabitants, organized under the general law for the incorporation of cities, villages and towns, in this State. Some time in January, 1882, the disease known as small-pox became epidemic in Cable, and the village board, acting under the authority of the statute—Item 76. sec. 24, R. S.—appointed a board of health, prescribing its duties, and as nearly as the emergency of the case would admit, to make all the regulations and to do all acts necessary or expedient for the suppression and prevention of the spread of the said disease among the inhabitants of the village. The board proceeded to establish rules and regulations in reference to the controlling of said disease, quarantining, etc., and to post and publish the same in said village. The said board of health placed itself in co-operation with and virtually under the direction of the STATE BOARD OF HEALTH.

The said rules and regulations relative to quarantine seemed in all cases to be strictly observed by the villagers, save the plaintiff, who was, we believe, the only violator of the same in the town of Cable, and who openly refused to obey the same, after due notice and warning; whereupon the said board of health, in good faith, believing that the family of plaintiff, or at least certain members thereof, had been exposed to said disease, and in their desire to act for the welfare of the people of Cable in the matter, proceeded to enforce the quarantine regulations against said plaintiff, by causing his arrest and confinement; which measure seemed to them necessary to attain the end of preventing said plaintiff from wilfully, and at least with criminal carelessness, if not maliciously spreading said disease of small-pox, which the evidence shows had already proven fatal in four cases, further among the people.

For this arrest and attempted enforcement of the quarantine rules of the board of health against him, plaintiff sues the members of said board and the officers acting under them, in an action of trespass, for damages for false imprisonment; and being defeated in the court below, he prosecutes his appeal to this court.

Counsel for appellant contends that "there being no ordinance establishing a board of health, the trustees establishing a board without it, was void," citing *Mason v. Shawneetown*, 77 Ill. 533, and the statute, in support thereof.

This decision, in the case cited, has no application to the case at bar, from the fact that it is based upon facts showing that Shawneetown was acting under a charter which prescribed; that its council should only act under ordinances properly passed, while, in this case, the village of Cable is organized and acting *not* under a charter, but under the general law, from which it derives all its authority, and which requires only that the meaning and intention of the statute be complied with, viz: "To appoint a board of health, and prescribe its powers and duties."—Item 76. sec. 62, chap. 24, R. S.

Here we see that in cities, towns and villages incorporated under the general law, the boards of health are appointed by the city, town or village council by authority of the statute above quoted. Where a village is organized under a special charter, such charter usually provides how the board of health shall be constituted and appointed.

The portion of the statute referred to by counsel, says the trustees shall have the power "to pass all ordinances, *rules*, and make all *regulations* proper and necessary to carry into effect," etc., etc.—Item 86, sec. 62, chap. 24, R. S.

The trustees in this instance did make all "rules" and "regulations" they deemed necessary to control the disease which was already upon and dealing destruction among them, and which we claim that under the wide range of power given them in sec. 62, chap. 24, R. S., they had full authority to do.

Appellant claims that "it was unlawful for the trustees to appoint three of their number a board of health," etc. The statute cited in support of this claim, is as follows:

"That it shall be and is hereby declared unlawful for any alderman of any city, or member of the board of trustees of any village of this State, during the term of office for which he is elected, to accept or be appointed to or hold any office by the appointment of the *mayor* or *president* of the board of trustees thereof; and any and all such election and appointment shall be absolutely null and void."—Sec. 2, chap. 102, R. S.

This section of the statute referred to by counsel, and quoted above, would apply in his favor if there was anything in the evidence to show that the appointment of this board of health was by the *president* of the village board. But unfortunately for the plaintiff, there is not a word in the evidence to show such a state of facts. The board of trustees and not the *president* of the board appointed the board of health.—Abstract, page 33.

There is nothing in the statute prohibiting the appointment of a board of health, either by resolution or motion adopted by the board of trustees, at a meeting of said board. The statute only renders void the appointment by the president, and if necessary we think we could show to the satisfaction of this honorable court, that the intention of the statute is to apply only to appointments to offices affording an opportunity for collusion between the appointing officer and the appointee for financial gain—corruption and fraud; that it does not apply to such officers as the board of health, where there is not the slightest reason for its application. Being a legally constituted board, no admission of counsel could operate prejudicially to their interests. Counsel for plaintiff asks "by what authority the township board of health met with the village board of health and formed themselves into a co-operating board of health," etc.

By authority of the order of the STATE BOARD OF HEALTH, as follows:



*Board of Health of Richland Grove Township, Cable, Ill.:*

"You are hereby directed to co-operate with Cable board of health in the enforcement of order fifty-three of this BOARD, concerning the prevention of small-pox.

By order of the STATE BOARD OF HEALTH,

JOHN H. RAUCH, M. D., *Secretary.*"

(See page 46 of abstract, also other orders on same page.)

[The other orders referred to are as follows:

"SPRINGFIELD, ILL., January 7, 1882.

*"Board of Health, Cable, Ill.:*

"You are hereby empowered to enforce the rules and regulations of this BOARD concerning the prevention of small-pox as set forth in order No. 53. If necessary you will call upon the sheriff of Mercer county to assist you. Richland Grove township health board is required to co-operate with you.

By order of the STATE BOARD OF HEALTH:

[SEAL.]

JOHN H. RAUCH, M. D., *Secretary.*"

And this in response to an inquiry as to quarantining of individuals belonging to infected families:

"ILLINOIS STATE BOARD OF HEALTH, OFFICE OF THE SECRETARY,

S. B. H. No. 3139.

SPRINGFIELD, ILL., Feb. 3, 1882.

"DEAR SIR:

"Proper discretion should be exercised in quarantining individuals. If the sick-room is cut off from other parts of the house, only those in active attendance upon the sick need be quarantined. It is better to err on the safe side, however. Without you can make sure of the prudence and good faith of the people, you had better quarantine.

JOHN H. RAUCH, M. D., *Secretary.*"

"To F. J. VON ACH, Cable, Ill."

Then follows the entire text of the rules and regulations for the prevention of the spread of small-pox—S. B. H. No. 53—submitted in evidence by the defendants.)

Under the statute the STATE BOARD had full authority to give such directions and orders.

Counsel again says:

"It was contended by appellant in the trial below that these men could not justify the arrest and imprisonment as officers *de facto*," etc. Page 7, counsel's brief.

This point was only contended for as against the board of health of Cable, and was fully met by defendants' offering in evidence, first the certificate of election of the trustees of the village, and second, the records of the village showing the appointment of the board of health in due form, and third, testimony of Thomas Salkeed, one of the trustees, that the appointment was made when he was present. (Pages 17, 18, and 33 of abstract.)

Another point made by appellant is upon section 2, of the Bill of Rights of the Constitution, that "No person shall be deprived of life, liberty or property without due process of law," and asks very pertinently, "What is due process of law?"

We contend that this varies with the circumstances. That process which deprives a person of no rights which he ought to enjoy, that is, which are consistent with the rights of the public, and which secures to him that justice and fairness in all cases vouchsafed to him by the constitution and laws, is due process of law, where there is no particular process prescribed.

The evidence in the case shows that the people of Cable were in a high state of excitement and alarm concerning the small-pox in their midst. That everything in the power of the village board of health and of the township board of health, acting under the direction and advice of the STATE BOARD, was being done to control said disease and to check its ravages among them. That they had inaugurated a system of quarantine against all who had been exposed, or were suspected of being exposed, to the disease. That the quarantine rules were posted in the village and the orders of the STATE BOARD OF HEALTH were freely distributed among the citizens.

That notwithstanding appellant and members of his family had been exposed to said disease and was liable to spread the same by circulating among the people, he, the said appellant, openly ignored all these facts and continued to go about in violation of all orders of said authorities. They by moral suasion or the issuing of orders could do nothing with him. He would obey no orders. In this emergency the local board were forced to comply with the following order from the STATE BOARD, to-wit:

"You are hereby empowered to enforce the rules and regulations of this Board concerning the prevention of small-pox, as set forth in Order No. 53. If necessary you will call upon the sheriff of Mercer county to assist you.

By order of the STATE BOARD OF HEALTH:

JOHN H. RAUCH, M. D., *Secretary.*"

Also, Order No. 53.

"All needed power and authority for the enforcement of these rules are provided by the law, and should be unhesitatingly employed whenever necessary. Police officers, sheriffs, constables and other officers and employees of the State are specifically enjoined by the statute to aid in the enforcement of such rules and regulations."

Under these orders, and after full knowledge by appellant of what these orders were, the defendants acted in good faith for the interests of the people in the case.

Considering the numerous references already made to the cause which actuated the defendants in depriving the appellant, so far as they did so, of his liberty, and that the court is necessarily already perfectly familiar with the emergency existing in this case, as well as the fact also that in all cases sounding in damages the court will rarely interfere to disturb the verdict of the jury, (*Terre Haute, Alton & St. L. R. R. Co. vs. Vanatta*, 21 Ill. 188.) and that the evidence shows the entire actions of defendants to be justifiable in law and eminently satisfactory to the whole community where the acts were done, we respectfully submit these questions involved.

As to the 8th, 12th and 13th instructions refused by the court below, we shall not take the time of this court to answer further than is already done in our previous remarks.

As to the 14th instruction, which undertakes to state what amounts to false imprisonment, and is essentially wrong, we submit that the court did a good act to choke it in its infancy. (Abst., page 59.)

The 15th instruction, refused, is also covered by our former remarks, and the question involved is well settled by the statute.

All of which we submit to your honorable consideration.

JAMES MCCARTNEY, *Attorney-General.*

## MONROE COUNTY.

### RENAULT:

Only 20 cases of small-pox are reported from Renault, but the history of the outbreak, and other facts, go to show that these are only a portion of the cases which actually occurred. On the 3d of December, 1881, a young man arrived from St. Louis suffering with an eruptive fever, which was variously pronounced variola and varicella. The first group of cases which followed were diagnosed as varicella, but on the 23d and 24th of December the disease was recognized by Drs. Wilhelmj and Chewning as variola. In the family of the visitor there occurred five cases, with one death; and thence it was propagated in various directions until a total of 20 admitted cases occurred, with four deaths. Cost, \$423.

Reporters: C. F. W. WILHELMJ, M. D., Maecystown, and J. CHEWNING, M. D., Renault, attending physicians.

### BLUFF PRECINCT:

Belonging to the same outbreak as the Renault cases, and due to these latter, are two cases which occurred in Bluff precinct and three in Mitchie precinct, in the latter part of January, 1882. Of the former both recovered, but one of the Mitchie cases—an unvaccinated infant—died. All the other patients had been vaccinated previous to exposure. Cost to private individuals, etc., \$906.

Reporter: C. F. W. WILHELMJ, M. D., Maecystown, attending physician.

### MITCHIE PRECINCT:

See *Bluff Precinct*.

### STATON'S ISLAND:

The origin of this outbreak was, for a long time, in doubt. Owing to high water for some weeks previous to the appearance of the disease, early in July, 1882, it was believed that the island (which is in the Mississippi river, just north of Harrisonville, Monroe county.) had been completely isolated; and it was claimed that no one had left or visited the island for a period considerably longer than the maximum of incubation. In the absence of other probable cause of origin, it was at length attributed to "some infected article of bedding or clothing, which had drifted on to the island, during the high water, and subsequently been picked up or handled by the first patient."

It was not until the following December that the reporter succeeded in exploding this theory, by ascertaining that the daughter of one of the residents on the island returned to her home from Springfield, Mo., about the last of April or first of May; that the night before leaving Springfield "she sat up with [the corpse of] a woman that had died of small-pox;" that she picked her clothes in a box, which was not opened for some time after her arrival on the island; that about three or four weeks before the first case appeared, she went out to work in a neighbor's family, and "slept and hung her clothes up in the same room with the little boy that first contracted the disease." She had been in her father's family some time before going to the neighbor's; but its members had all been successfully vaccinated about one year before, and thus escaped, while the boy, who was directly exposed, had never been vaccinated.

The duration of the illness is not given in the reports, but only the dates when discharged convalescent. These vary from periods of "a day or two" to fifteen days; and the disease appears to have been very mild, even the confluent cases only lasting twelve and fifteen days respectively, before being pronounced "convalescent."

A farm-hand, employed on the island, was allowed to leave the infected locality in the early part of August, and introduced the disease into Randolph county in the vicinity of Prairie du Rocher, where he himself died on the 21st of that month. Twenty cases, with six deaths, occurred as a result of this introduction, making, in all, a total of thirty-three cases with 7 deaths, as the result of the criminal folly and carelessness above recounted. Indefinite reports of other cases in the country south of Harrisonville have been received; but the attending physician in these cases to whom necessary blanks, etc., were promptly sent, has failed to respond.

Reporter: WILLIAM L. JAMES, M. D., Harrisonville, attending physician.

#### HARRISONVILLE:

See *Staton's Island*.

#### LITCHFIELD:

Between December 15, 1881, and April 15, 1882—dates of first and last cases, respectively—the city clerk, GEORGE W. JONES, reports 44 cases of small-pox and 9 deaths. Details of 16 cases, 6 fatal, have been received from two of the four physicians who attended patients. Origin of first cases, in 1881, not reported by them, but subsequently ascertained to be due to German immigrants. In January, 1882, a railroad-bridge builder was attacked with the disease, but whether contracted in Litchfield or elsewhere is not stated. There were 10 cases and 4 deaths in this group. Three cases and one death resulted from infection introduced into a family by a pet dog. Four cases and one death were caused by the mother of the family scrubbing out an infected store-room.

After an interval of 49 days (early in June, 1882,) five members of a family were attacked with the disease probably contracted "while on an emigrant train near New York City." Vaccination had been so generally enforced that no spread of the disease outside of the family occurred. Total cost, 49 cases—9 deaths, \$5,920.

January 23, 1881, the disease was again introduced into Litchfield, by "a visitor from Kentucky," who infected two members of the family whose guest he was, and two other families, in one of which there were four cases and one death. There were in all, from this source, a total of 9 cases and 1 death—the fatal case being an unvaccinated child, aged two years; the remaining cases were all mild varioloid, the individuals having been protected by recent vaccination.

Reporters: J. F. BLACKWELDER, M. D., J. H. TILDEN, M. D., and P. T. JAMES, M. D., attending physicians; GEORGE W. JONES, city clerk.

#### MORGAN COUNTY.

##### JACKSONVILLE:

June 4, 1882, a tramp, suffering with small-pox, arrived in Jacksonville on a freight train. No further details of the case reported, except that the patient recovered.

##### MURRAYVILLE:

December 4, 1882, a grocer, living in Murrayville, returned from Chicago, and ten days after came down with an attack of modified small-pox. The usual precautions were observed; premises quarantined; his wife, who nursed him, was revaccinated successfully, and no other cases resulted.

Reporter: C. M. VERTREES, M. D., attending physician.

#### OGLE COUNTY.

##### TAYLOR TOWNSHIP:

January 20, 1882, a young girl, recently returned to her home, about six miles north of Franklin Grove, after a visit to Canada, was found at the beginning of the exudative stage of unmodified small-pox. Two others, who had been nursing her before the character of the disease was recognized, had mild attacks of varioloid, both having been successfully vaccinated some sixteen years previously, and successfully revaccinated on the fourth day of exposure. Precautions of the STATE BOARD were faithfully carried out, and no other cases resulted. Total cost, \$390.

Reporters: S. A. GRISWOLD, M. D., Franklin Grove, Lee county, attending physician; W. J. HANGER, town clerk.

##### BYRON:

In May, 1882, one case of varioloid was reported at this place, but no details have been received. Vaccination had been generally enforced during the previous winter, no spread of the disease occurred, and the patient recovered.

Reporters: W. C. MURRAY, M. D., and J. P. WAYLAND, M. D.

##### KINGS:

The town board of health of Kings reported one case of unmodified small-pox, November 11, 1882. The case terminated fatally on the 18th, but no other information has been furnished.

Reporters: C. KLEIN, W. H. KING, LEVI KENDALL, town board of health.



## PEORIA COUNTY.

## PEORIA:

December 24, 1881, a student in attendance at the College of Physicians and Surgeons, Keokuk, Ia., returned to Peoria to attend a wedding; the next day he was taken ill with what proved to be a severe attack of small-pox, described as "confluent and hemorrhagic," notwithstanding a successful vaccination when three years old, but not subsequently repeated.

A woman and her daughter arrived from Chicago, January 8, 1882, the former discharged "convalescent" by her attending physician, January 3. After five days' residence in various parts of Peoria, riding in street cars and spending one night in the railroad depot, the facts concerning them came to the knowledge of the authorities, and upon examination, it is alleged that the pustules on the mother were found still suppurating. They were both removed to the hospital.

The community generally had been well protected by recent vaccination, and there was no spread of the disease from these cases.

Early in April, 1882, a painter, who had not been away from home for more than six months, had a severe attack of confluent small-pox, notwithstanding a successful vaccination ten years previous. His sister, who nursed him, also vaccinated at the same time, had a mild attack of varioloid, being confined to bed only one day. No other cases resulted.

Reporters: E. A. KEITH, M. D., and JOHN STOUT, M. D., attending physicians; JOHN N. NIGLAS, M. D., and J. L. HAMILTON, M. D., health officers.

## PIATT COUNTY.

## CERRO GORDO:

About the middle of December, 1881, a young man returned to Cerro Gordo from New Mexico, and on December 20, after some days' illness, was pronounced to have varioloid. From him, through delay in diagnosis and consequent exposure of a large number of persons, there resulted 16 other cases, with one death, before general vaccination and other preventive measures arrested the spread of the contagion. Subsequently, in February, 1882, a "public musician," living four miles north of Cerro Gordo, was attacked; supposed to have contracted it at or near Farmer City. No spread from this case.

Reporters: W. M. HARSHA, M. D., and P. S. REPLOGLE, M. D., attending physicians; V. B. CLIFTON, president village board.

## WILLOW BRANCH TOWNSHIP:

January 5, 1883, an unvaccinated infant in the township of Willow Branch, six miles from Cerro Gordo, was reported sick with small-pox. The family lived in an isolated neighborhood, had not recently been away from home, and the only possible source of contagion suggested was through the visit of a traveling tree-peddler about a fortnight before. Vaccination after exposure proved successful, and the case recovered without any spread of the disease to others.

Reporter: H. C. JONES, M. D., Cerro Gordo, attending physician.

## PIKE COUNTY.

## GRIGGSVILLE TOWNSHIP:

Small-pox was introduced into this township (at New Maysville), by the son of a clergyman, whose wife died at Cuba, Fulton county, January 28, 1881, of "undeveloped small-pox"—the nature of the disease not being determined for some time after her death. Four days after his arrival (February 8) an eruption appeared, which was at first thought to be measles, and then chicken-pox. February 25th two other persons, members of families living in the same house, also had eruptions following four or five days of malaise and feverishness.

Intelligence of the epidemic at Cuba had, by this time, reached Pike county, and the disease was finally pronounced to be small-pox. Meantime, the boy had visited the neighboring town of Griggsville, had been to church and in many houses and stores. Five members of the two families in the house where he lived contracted the disease, and the only unvaccinated one died; the rest recovered. Six other families became infected, furnishing 16 more cases.

Of the total number of cases in this group, 22 in all, fourteen are reported to have been vaccinated, none more than once, although many of them were adults; for example, one patient "had been vaccinated 60 years ago, with good result, and had a very mild attack." In four others, ages ranging from 25 to 43 years, "vaccination in childhood," or "when young"—"result good;" "light" or "very light attacks."

Concerning one young married woman, ætat 20, it is stated that she was vaccinated, for the first time, "about 10 o'clock p. m., March 21st, and on the 24th she had the premonitory fever; but the vaccination took, and so modified the disease that she had only a light attack of varioloid, thus showing the value of vaccination, even almost up to the time of the disease making its appearance." This patient miscarried four days later (period of gestation not stated), but convalesced from this complication favorably until April 6, when "inflammation of the bowels" supervened, as the result of some imprudence, and she died on the 11th, "having almost entirely recovered from the varioloid when the inflammation set in." In the remaining seven cases, no vaccinal history is given of three who recovered, and of the other four, reported "never vaccinated," three died.



In the town of Griggsville only two cases occurred, the first being the result of direct contact with the clergyman's son from Cuba; the other being the attending physician in the New Maysville cases.

The first case resulted fatally, March 8, on the eighth day of the attack, the disease being of the hemorrhagic type; had been vaccinated "imperfectly, twelve years previous," and again after exposure unsuccessfully. The case was thoroughly isolated, vaccination was made general throughout the community, and no other cases followed from this. So much alarm and excitement were caused by the reports from Fulton county, and the first cases in the township, that the Secretary was requested to visit the locality, which he did on the 8th and 9th of March, and advised as to the necessary measures. By the middle of April the outbreak had been entirely suppressed, the last death from the disease being on April 2.

From the New Maysville group of cases the disease was carried to New Salem township (which see). Total cost of the outbreak to Griggsville township, \$1,894.50; individual, constructive and estimated losses not reported.

Reporters: W. O. SKINNER, M. D., attending physician; DANIEL DEAN, mayor; J. B. MORRISON, EDWARD A. F. ALLEN, JAMES M. CREE, township board of health; I. D. FAGIN.

#### NEW SALEM TOWNSHIP:

While the epidemic was at its height in Griggsville township, adjoining on the east, cases of small-pox appeared at New Salem, first among some relatives of the family originally infected at New Maysville from the Cuba, Fulton county, cases. Seven members of four families were attacked between March 7, 1881, and the close of the month.

Vaccination was quite generally resorted to, even before the appearance of the first of this group of cases; and only one person thus protected became infected. This was a light attack of varioloid, so mild as not to need the attendance of a physician; but from it resulted the only fatal case in the township—a young woman, vaccinated unsuccessfully in childhood, and upon whom the operation was not repeated. The total cost of the outbreak to the township is stated at \$1,055.

Reporters: W. O. SKINNER, M. D., Griggsville, T. DOYLE, M. D., New Salem, attending physicians; J. M. LAIRD, supervisor.

#### KINDERHOOK TOWNSHIP:

A railroad-bridge-builder, employed on the bridge over the Mississippi at Louisiana, Mo., came into contact with a party of immigrants crossing the river into Missouri in the early part of May, 1881. About the 20th May he returned to his home near Hull's station, in Kinderhook township, where he died soon after, his funeral being attended by a large number of people. June 7th the STATE BOARD was telegraphed that there were seven cases of small-pox in the vicinity of Hull's, and "probably one hundred exposed."

On his arrival, the following day, the Secretary found thirteen cases in the township and investigation showed that all of those afflicted had been in direct contact with the bridge-builder, leaving no doubt as to the character of his illness, which had not been recognized at the time of his funeral.

Immediate vaccination and revaccination of all susceptible persons in the township was advised, and largely enforced; liberal supplies of vaccine virus were furnished; the rules and regulations of the BOARD were carried out; a tent was furnished for hospital purposes, and every effort made to limit the disease to those first exposed, either by nursing and visitag or at the funeral.

This was so far successful that, up to June 23, out of 25 cases which had then occurred, 22 were among those who had been personally exposed to the bridge-builder during his illness. A second group of nine cases followed among the families of those thus infected—all of these being among persons vaccinated with the first supply of virus received, and which was, unfortunately, of poor quality, and failed "to take" in many instances.

Nine deaths occurred among the 15 unprotected; the remaining 20 cases of modified small-pox all recovered.

The thirteen cases first found on the Secretary's arrival were in three small overcrowded houses; and it was directed that, immediately upon the arrival of the hospital tent (which was at once telegraphed for), these should be relieved by removing some of the sick from each house to the tent. This was done on the 12th and 13th June, and all those transferred to the tent recovered, while five died among those remaining and treated in the houses.

In addition to the 35 cases in Kinderhook township, there were also two cases of mild varioloid, due to the same source of contagion, near Stone's Prairie, just across the line in Adams county. (See Richland, Adams county).

The total cost to Kinderhook township is returned at \$1,172; personal, constructive and estimated losses, not given.

Reporters: SMITH HULL, supervisor, Kinderhook; B. MILLER, E. T. BRIDGE, Hull's station.

#### HULL:

See Kinderhook Township.

#### GRIGGSVILLE:

See Griggsville Township.

## SPRING CREEK TOWNSHIP:

January 15, 1882, a farmer living near Strout station was found in the exudative stage of unmodified confluent small-pox. Disease contracted by sleeping in a room near Jerseyville (which see), in which a small-pox patient had recently died. Five other members of the family became infected, and two out of the six cases terminated fatally. Total cost to individuals, \$660; to township, \$365.

Reporters: W. T. WILLIAMS, M. D., Pearl, attending physician; R. R. POLLOCK, M. D., Nebo, board of health.

## NEBO:

See *Spring Creek Township*.

## POPE COUNTY.

See *Stone Fort, Saline County*.

## PULASKI COUNTY.

## MOUND CITY:

During the summer of 1882 there were 6 cases of small-pox at Mound City; contagion introduced from Cairo. These cases were not reported at the time, because "the city officials wanted it kept quiet, for fear of injury to the place." No details have been received, and it is not known whether any of the cases proved fatal.

## MOUND'S JUNCTION:

The body of a negro woman, who had died of small-pox in Cairo early in May, 1883, (case not reported by the Cairo authorities,) was removed to Mound's junction, a few miles north of Cairo, for burial. May 17, the deceased woman's daughter and her husband, three children (one married) and one grandchild of this couple, and the husband's brother, were found in the eruptive stage of the disease, the husband, his brother and one of the children dying twelve days later, May 29. Owing to the destitute condition of these people and their isolation (living in the woods two miles west of the junction,) no precautions were taken to prevent spread of the disease, and on June 2 another group of 6 cases, in three families, appeared.

Meantime the county commissioners had been directed to take charge of the locality; the existing cases were isolated and provided for by the overseer of the poor; vaccination was enforced, and the further spread of the disease was limited to three more cases in the families already infected.

All the adults among these people were formerly slaves (from Alabama), and had been vaccinated in childhood, but none of the minors had ever been vaccinated. After preventive measures were adopted, only the attending physician and one person who carried supplies were admitted to the infected locality; all premises were thoroughly cleansed, whitewashed and otherwise disinfected, clothing and bedding were burned, and the contagion was believed to have been eradicated by the last of June. No statement of cost has been furnished.

Reporter: B. C. TABER, M. D., Mound City, attending physician.

## RANDOLPH COUNTY.

## PRAIRIE DU ROCHER:

In August, 1882, a laborer who had been at work on Staton's island, near Harrisonville, Monroe county, came to a family living about three miles from Prairie du Rocher, was taken ill about the 21st, and died September 7th of confluent small-pox. From this case, up to October 9, there had resulted 15 others. Of these 16 cases, 10 had never been vaccinated, and 6 of these died; of the 6 vaccinated, 5 recovered and 1 died during the febrile stage.

Reporter: J. SLOEY, M. D., Prairie du Rocher, attending physician.

## CHESTER:

A small-pox convalescent, from St. Louis, arrived in Chester about the middle of July, 1883. His illness in St. Louis was incorrectly diagnosed, and no precautions were observed by him on his return. August 3, his son, aged 4 years, was found in the febrile stage, and although the disease was promptly recognized and vaccination at once resorted to, one other case followed on the 17th. This latter patient was vaccinated as soon as virus could be obtained from St. Louis and repeatedly thereafter until variola developed, but unsuccessfully in every instance; failure attributed to "high temperature, rendering vaccine virus inert." The patient died on the tenth day.

Reporter: W. R. MCKENZIE, M. D., attending physician.

## RICHLAND COUNTY.

## OLNEY:

In April, 1882, a resident of Olney contracted varioloid in St. Louis, and returning to his home communicated the disease to his daughter, unvaccinated; both recovered. From this latter case a neighboring family became infected, concerning which the attending physician reports as follows:

"On visiting the place designated, I found a family, consisting of father, mother and six children, four girls and two boys. One of the girls, a young woman about 20 years of age, had distinct small-pox, and was already in the third day of the eruption. None of

the family had ever been vaccinated. The father would not submit to vaccination, but I at once vaccinated the mother and the five children. The mother and four of the children took well-marked vaccinia, and of these the mother and the two youngest children, girl and boy, were perfectly protected; two others, a young man and a girl aged about sixteen, had varioloid. The other girl, aged about eighteen, and in whom vaccination failed to act, suffered a very severe attack of confluent small-pox. The father, also, suffered an attack of confluent type of the disease, and died on the day that the eruption appeared, of melæna."

"These vaccinations were made with humanized lymph, one remove from B. V., which I regard as the best form for virus. 1st, I regard it as more prompt, and rapid in its action, and when carefully selected less apt to be attended with complications of any kind; less severe in its action, and healing much more kindly."

Total cost, \$1,253.68.

Reporters: E. ROWLAND, M. D., attending physician; O. C. PALMATEER, city clerk.

#### ROCK ISLAND COUNTY.

##### MOLINE:

A manufacturing establishment at Moline received a bale of rags from Chicago in November, 1881, and began using them (to wipe machinery, etc.) about the 10th of December following. On the 29th of December four cases of small-pox were reported to the local board of health, and within the next forty-eight hours four more were discovered—seven living in different parts of Moline and one in Rock Island, but all working in the shop where these rags were used. The shop was immediately closed by the local board. "The rags gathered up and buried with quick-lime, and the factory thoroughly fumigated for twenty-four hours with sulphurous-acid gas."

Of these seven cases in Moline, the health officer reports that "only one was vaccinated, and he 20 years previous to this attack, which was a mild varioloid." Of the remaining six, five died. Notwithstanding that the most energetic measures were instituted as soon as the cases were discovered, a second group of seven cases followed in the families or houses of those first infected. Among this latter group were two who had never been vaccinated, and one of these succumbed, making a total of six deaths out of eight unvaccinated.

A compulsory vaccination ordinance had been passed just prior to this outbreak (December 20, 1881,) and to its rigid enforcement, in which the authorities were aided by employers and owners of factories, etc., and to the effectual isolation of the cases, disinfection of premises and other precautionary measures, is probably due the prompt suppression of the contagion from this source.

Subsequently there were three more cases during the last of January and first of February, the origin of which was not ascertained. From the last of these there resulted four other, making in all a total of 21 cases and six deaths. Some interesting data will be found in the "Notes" appended to the tabulation of these cases (Nos. 854-874, inclusive, Tabular Statement.) The only item of cost reported is \$6,000, which the city expended for a hospital, care of cases, gratis vaccination, etc.

After an interval of nearly a year, a group of five cases (one small-pox and four varioloid,) was reported January 10, 1883. "No deaths, and no spread of disease beyond those in the boarding-house where the first case occurred. Vaccination in community very general during past two years. Source of contagion, as yet unascertained."

Reporters: C. PIPER, M. D., president board of health; L. G. DUNN, M. D., secretary board of health; G. T. EYSTER, M. D., and W. K. SLOAN, M. D., attending physicians; G. W. GAMBLE, town clerk, South Moline township.

##### ROCK ISLAND:

The first case of small-pox in Rock Island, during this epidemic, was discovered March 8, 1882, in a family living near the Moline line, and which obtained its milk supply from one of the infected families in Moline. Although many persons had been exposed before the existence of the case was detected, vaccination had been so general in this community that no excitement was caused, and no other case resulted from this source.

In April, however, two new cases were found in a family which three weeks before had received two German immigrants, relatives, who had just arrived in this country *via* Baltimore. "A few days after their arrival an eruption appeared upon both of them, so slight as to simply cause some uneasiness, and no physician was called." Subsequently two more members of this family were attacked.

In May another family became infected from the same source, and on May 27 the last of this group of cases was reported, making in all 17 cases due to immigrant introduction, only 10 of which were officially reported or came under the notice of a physician.

During June and July there were three more introductions of the disease, two from Davenport and one from Iowa City, but without any spread from either; the last two cases being so mild that doubt is expressed as to their character.

In all there were about 20 cases (including those not officially reported), with two deaths, one of these being an infant, two months old, never vaccinated; the other an old man, 79 years of age, just arrived from Germany, where he was vaccinated in childhood, but not since repeated.

The cost of the cases for quarantining, vaccination of exposed, etc., is reported at \$261.70 for the city, and \$366.77 for the county; total, \$628.47.

Reporters: G. G. CRAIG, M. D., health commissioner; G. L. EYSTER, M. D., attending physician.



## ST. CLAIR COUNTY.

## EAST ST. LOUIS:

The only reports received from this place indicate a total of 12 cases of small-pox, with one death, between November 30, 1881, and January 5, 1882. The first case was a railroad brakeman, but there seems to have been no spread from this. On December 4, a man from St. Louis was received as a boarder in a family in East St. Louis, and on the 18th there were 6 cases reported in this family. No further details have been received.

Reporter: J. J. McLEAN, mayor.

## BELLEVILLE:

The attending physician reported (February 24, 1882,) one case in the country 9 miles south of Belleville. Patient, "two weeks before being taken sick, made a trip on train to Duquoin; saw a man on train said to have variola." Vaccinated every member of the family at first visit; all successful. Isolated case from family; no spread of contagion.

One year later, February 16, 1883, a tramp was found wandering through the streets of Belleville, suffering from a mild attack of varioloid. He was immediately removed to the county hospital, completely isolated, his ward put in strict quarantine, and all the inmates of the institution were thoroughly vaccinated.

Two more cases (tramps from St. Louis) occurred in March (non-fatal), after which the building "was overhauled, whitewashed, painted and scrubbed, and every precaution taken to clean it well. It was disinfected and allowed to remain vacant for at least three weeks." Notwithstanding these precautions, four more cases followed upon its occupancy in April, three of them proving fatal.

Reporters: WASHINGTON WEST, M. D., FERDINAND RUBACH, M. D., attending physicians.

## REUTCHLER STATION:

A family who had "buried a five-year old daughter (died of small-pox,) in St. Louis May 21, 1883," came to Reutchler Station, 6 miles east of Belleville, on a visit, and May 26 the attending physician reported two of the children down with the disease. One of these died and the other recovered, without any more cases following.

Neither of these children had been vaccinated before their attack, although under exposure eleven days in St. Louis; "the parents stoutly affirm that he (the St. Louis physician,) did not vaccinate any member of the family during the entire eleven days that he attended the little daughter who first died, but that he gave them some 'drops' which were to take the place of vaccination."

Reporter: WASHINGTON WEST, M. D., Belleville, attending physician.

## SALINE COUNTY.

## STONE FORT:

October 20, 1883, a dressmaker, recently returned from St. Louis, was found in the exudative stage of unmodified small-pox; died November 3. Of 7 persons, among those exposed to this case, 6 died, two of them of the hemorrhagic variety. Four of these had never been vaccinated until after exposure, and then with inert virus at late stages of the disease—the operation proving a failure in all cases. Of the remaining fatal cases, one adult exhibited a modified cicatrix, humanized virus, operation performed in childhood, twenty years before; the other, a child of ten years, a modified cicatrix, bovine virus, operation performed two years previous.

Relatives of the first cases became infected and carried the disease southward into Pope county, where they resided, and where 6 cases with 4 deaths resulted.

Of the total 15 cases, 7 of the 9 deaths were of 7 unvaccinated persons, the other two being explained above; the remaining 6 cases, and which recovered, were among persons previously successfully vaccinated.

The cost of seven cases at Stone Fort is reported at \$700.

The fatal nature of the cases first attacked caused great excitement, and the Secretary was finally obliged to visit the locality in person, which he did, November 20-24. The last case terminated fatally, December 23.

Reporters: Drs. WILLIAM G. OSBURN and DAVID BOZARTH, attending physicians, W. E. BURNETT, county clerk.

## SANGAMON COUNTY.

## SPRINGFIELD:

On the 7th of January, 1882, a "holiness preacher" arrived in Springfield, from Louisville, Ky., via St. Louis. He was sick on his arrival, and the family with which he staid noticed an eruption on his face and neck. The following day, Sunday, he held a religious meeting in the house of this family, at which about 20 persons were present; and the next day left for his home near Athens, Menard county, (which see.) Between January 20 and February 12 there had resulted 12 cases and 5 deaths among the 20 persons present at the meeting; but by careful surveillance of those exposed and general vaccination in the infected neighborhood (which was limited in extent,) the outbreak was confined to those directly exposed to the preacher.

The contagion was, however, repeatedly introduced from abroad during the first six months of the year, namely: January 13, by a tramp from Chicago, who died on the 19th, no other cases; January 14, by a woman who had been visiting in Chicago, died on the



18th, no other cases; February 21, by a colored tramp from Chicago, recovered, no other cases; March 5, by a colored man returning from a visit to Chicago, died March 17th, no other cases; March 20, by a colored tramp from Chicago, died April 15, and infected a family of 5 persons (colored) and 2 colored prostitutes; (from the colored family ten other colored, and two white, families, numbering in all 22 cases became infected;) April 26, by a laborer returning from St. Louis, died May 6, no other cases, (wife and child vaccinated and removed to hospital, and all persons in the neighborhood vaccinated;) April 30, by a child, source unknown, infected 7 others; May 1, by a woman, source unknown, infected 2 others, her husband and mother; same date, by a railroad conductor, source unknown, infected 3 others; May 2, by a coal miner, source unknown, (supposed to be from a tramp in a bar-room) infected 7 others; May 8, by a young woman, source unknown, infected 11 others in two families; May 10, by a married woman, source unknown, infected two others, her mother and husband; May 12, by a child, source unknown, diagnosed as variella, infected 4 others in two families; June 9, by a laborer, source unknown, infected his wife.

In all there were 92 cases of which some record has been made, and out of which number 15 died. All other data furnished are included in the appended Tabular Statement, Nos. 906-909, inclusive.

Reporters: W. S. MCBURNIE, M. D., J. L. MILLION, M. D., E. C. GAFFNEY, M. D., attending physicians.

#### WHEATFIELD:

January 14, 1882, the wife of a farmer living near Wheatfield returned from a visit to Chicago, and on the 24th was found ill with small-pox in the exudative stage. Had been successfully vaccinated December 18, and was discharged convalescent, January 27. Her husband and infant were vaccinated after exposure and escaped. Expense of the case, \$82.00.

Reporters: J. C. O'CONNOR, Buffalo, attending physician; W. R. WARE, town clerk.

### SCHUYLER COUNTY.

#### BLUFF CITY:

None of the attending physicians during the outbreak at this place, in the spring of 1881, have responded to requests for reports. The first information of the existence of the disease reached the STATE BOARD in the early part of April, and the excitement shortly reached such a height that the Secretary's personal presence was deemed necessary.

The contagion was introduced from Beardstown, Cass county, and seven families became infected in a short time, causing an aggregate of 18 cases, and 4 deaths, all the latter being among the 9 unprotected individuals.

It is believed that one family became infected through one of the attending physicians; and in another case a man inoculated himself with the disease by means of an ivory vaccine point, which was probably infected by the physician who handed it to him.

Reporters: J. S. DUNCAN, Bluff City; WALT HUDNALL, Astoria, Fulton county; J. R. SENCENICK, president, and S. W. McCUNE, clerk, Astoria board of health.

#### CAMDEN TOWNSHIP:

In April, 1881, a farmer, who had been away from his place twice within the month previous, was found to be suffering with confluent small-pox and died on the tenth day. An infant and a woman in the same family contracted the disease, but both recovered. The man and infant had never been vaccinated, and the woman only once, in childhood. The locality was isolated, and no spread occurred. In February, 1881, Dr. W. L. King contracted the disease while attending a case in Birmingham township, which see.

Reporters: A. J. MEAD, M. D., attending physician; PHILANDER AVERY, supervisor.

#### BIRMINGHAM TOWNSHIP:

January 8, 1882, another of the medical students exposed at the College of Physicians and Surgeons, Keokuk, was reported "down with small-pox" at his home in the southeastern part of Birmingham township. He had never been vaccinated until after exposure, and then unsuccessfully so far as affecting the progress or character of this attack, the patient dying on the twelfth day of confluent variola.

The attending physician, Dr. King, of Camden, and a child of the nurse of this patient became infected, Dr. King having a mild attack of varioloid, and the child an attack of unmodified small-pox; both recovered. Total reported cost, \$760.

Reporters: W. L. KING, M. D., Camden, and A. J. MEAD, M. D., Huntsville, attending physicians; MARCUS WHETSTONE, supervisor.

#### BROOKLYN TOWNSHIP:

January 16, 1882, a case of unmodified small-pox was reported from Brooklyn township; source of contagion believed to be the cases in Birmingham township, originating from the medical student from Keokuk. No other data furnished.

#### HUNTSVILLE:

January 25, 1882, the death of another of the Keokuk medical students, near Huntsville, was reported to the STATE BOARD. The victim was unsuccessfully vaccinated after exposure, before leaving Keokuk, but died of unmodified small-pox. No other data furnished.

## SHELBY COUNTY.

## MOWEAQUA TOWNSHIP:

## PENN TOWNSHIP:

See *Macon, Macon County.*

## STEPHENSON COUNTY.

## FREEPORT:

About the first of January, 1832, a German immigrant reached Freeport, having been in this country one week. On the 7th, he was found in the suppurative stage of variola of the confluent type, and died ten days later. The most energetic preventive measures were at once enforced, and no spread of the disease ensued.

Reporters: W. S. CALDWELL, M. D., attending physician; JAMES McNAMARA, mayor.

## SILVER CREEK TOWNSHIP:

About the 1st of February, 1832, a small-pox convalescent from Chicago arrived in Silver Creek, and two weeks later a laborer, with whom he had been in contact, was seized with small-pox and died on the eleventh day of the disease—complication, broncho-pneumonia. Two other members of the family and the nurse were subsequently attacked, one of the former dying on the eighth day. No other cases resulted. Cost to the town, \$252.14.

Reporters: L. E. VOIGT, M. D., Freeport, attending physician; A. GUND, supervisor.

## WEST POINT TOWNSHIP:

A farmer, living about four miles from Lena, West Point township, returned from a visit to Chicago, during the latter part of March, 1832, and two weeks later his wife was seized with confluent small-pox. Of five children, all vaccinated, two had mild attacks of varioloid. The cases being isolated and usual precautions observed, there was no spread of the disease. Cost to the township, \$125.73.

Reporters: W. B. STIVER, M. D., Lena, attending physician; Z. STOVER, Lena, supervisor.

## UNION COUNTY.

## DONGOLA:

About the last of December, 1831, a man, living four miles southeast of Anna, was reported ill with varioloid, but subsequently recovered. January 8, 1832, a man who had been exposed to small-pox in Cairo, came down with an attack of varioloid, and from him resulted four other cases, two of varioloid and two of small-pox—both the latter terminating fatally. No reports have been received from the attending physicians.

Reporter: WM. C. RICH, Jr., Anna, county superintendent of schools; FRANK NEUBAUER, president board of trustees, Dongola.

## VERMILION COUNTY.

## BUTLER TOWNSHIP:

In September, 1831, a resident of Rankin, Butler township, visited Chicago, and soon after his return was taken ill with what was supposed to be some form of malarial fever, being seen by physician only in febrile stage. Three weeks later his two sisters were taken down with what was soon recognized to be confluent small-pox modified by vaccination some ten years previous. During their illness the physician learned that the brother had also had an eruption, thus disclosing the character of his illness and the origin of these two latter cases.

No spread of the disease immediately followed, but in the following March a neighbor was seized with the disease, and from him resulted seven other cases and two deaths. It is alleged that the neighbor contracted the disease from handling scabs preserved by the first patients for the examination of a physician in Indiana, there being some dispute as to the character of the illness. It was not until the fifth of the March group of cases occurred that the disease was positively pronounced to be small-pox and energetic repressive measures instituted, after which only two more cases resulted, and the disease died out about the 20th of May.

Total cost of last six cases, \$487.58.

Reporters: H. H. ROSE, M. D., J. B. HAZEL, M. D., Rankin, attending physicians; H. A. KELSO, M. D., Paxton, consulting physician; D. A. SCHWARTZ, town clerk, Butler township.

## WABASH COUNTY.

## MT. CARMEL:

A mechanic, belonging to Mt. Carmel, was taken sick, November 19, 1831, while working in St. Louis. Left St. Louis for his home, in company with a daughter and friend, and died the same day on the train, of what was supposed to be a "congestive chill." Twelve days after the funeral, his daughter and two of those who assisted in preparing him for burial were taken down with small-pox. Before the disease was suppressed, in the latter part of December, there were seven other cases, making a total of 11 cases and six deaths. Five of the six deaths occurred among six unvaccinated persons.

Total cost of outbreak—constructive losses not included—\$2,090.

The following is the substance of a detailed history of the outbreak, submitted by Dr. J. Schneck, president of the local board of health:

**CASE I.** On the morning of November 21, 1881, J. B. H., aged 56, started from St. Louis, Mo., to come to his home at Mt. Carmel, Ill. By accident he met his daughter, Mrs. S. R. A., and Mr. D. C., at the depot, also on their way to this place. H. had been working at the carpenter's trade in the southern part of St. Louis. It has lately been developed that while there he roomed with a man who was taken sick and afterwards died of small-pox in the pest-house. H. complained of not feeling well and of being chilly at the depot; and while traveling in the car was restless and much depressed, and when within near 25 miles of Mt. Carmel, died suddenly and unexpectedly; was not under immediate observation of any one at the moment of death; was first found to be dead when an attempt was made to arouse him to change cars at Lawrenceville, but had been alive a few moments before. His body was brought by the 4 o'clock evening train and left at the depot at this place. While here it was hastily examined by Dr. E. D. Biddle, who failed to discover any evidences of small-pox on it. As soon as a conveyance could be had the corpse was conveyed to the family residence; while here it was seen by Dr. T. J. Rigg, who also failed to note any signs on it that could lead him to think it had died of small-pox. Messrs. E. M., W. C. C., W. M. A., W. R. and L. R. stripped, washed and dressed the body and placed it in the coffin; they all declare they noticed no eruption, but that the front of the body and thighs was thickly covered with small points of blood-stained discolorations and that these points frequently run together, making blotches of irregular size; and when shown a plate representing *purpura simplex*, all say that it exactly represents the markings on the body. The funeral services were held the following day, and were attended by a goodly number of our citizens—no one even suspected that H. had died of small-pox. He had never been vaccinated. All went well until December 4, when Mrs. S. R. A., (H.'s daughter who came with him on the train,) W. M. A. (no relative to the above), and W. R.—the two last named had helped to wash and dress the body on November 21—were all taken ill.

**CASE II.** W. R., aged 25, had a slight fever, and during the next few days had near a dozen pustules appear on the body which had the appearance of variolous eruption. None of the rest of the family took the disease from him. All—seven in number including himself—had previously been successfully vaccinated.

**CASE III.** In the case of Mrs. S. R. A., aged 19, after suffering from fever on the 4th and 5th, an eruption made its appearance on the evening of the latter day (14th day after her father's death). This at first appeared to be that of chicken-pox, and as the children of the family and in truth the school children generally, were suffering from this disease, it was thought by the attending physician that she was suffering from a very severe attack of variella; the character of the eruption, etc., clearly showed that such was the case. The vesicles filled and bursted within 48 hours from the first appearance. But there was also a finer and thicker eruption which kept on developing until, by the morning of the 9th, we were only too certain that this was a genuine case of small-pox. The fact was not known at this time that H. had been exposed to small-pox; so the origin of Mrs. A.'s infection was thought to have been some unknown party that was on the train or at the depot. Mrs. A.'s case proved to be a severe form of the confluent variety. She died Dec. 18. She had never been vaccinated.

The announcement of this case came like a thunderbolt from a clear sky. Virus was dispatched for, but it came too late to save those who had been exposed to Mrs. A.

The rest of the H. family consist of the mother, a son and one daughter; none of whom had ever been vaccinated, except the mother, who escaped entirely.

**CASE IV.** Miss H. B. H., aged 17 years, washed some clothes that had been worn by Mrs. A. while sick; her hand became severely inoculated first, then followed a tolerably severe form of the discrete variety of the disease; from which she recovered in due time.

**CASE V.** is R. H. H., aged 15 years. It appears that the vaccination he received several days after exposure modified the disease in his case. He had a very mild form of varioloid; was not confined to bed.

**CASE VI.** But one other person took the disease from Mrs. A.; this was Miss Ida M. N., aged 7 years. The eruption first made its appearance, in her case, after near 60 hours of high fever, on December 18. For the first few days the eruption was slight and increased slowly, so much that for several days it was thought it would prove to be a case of varioloid; but it continued to increase until it developed into a case of severe small-pox. This unusual course of the disease was probably owing to the effect of vaccination, which was in its sixth day, and well developed at the time the variola began. The pustules never advanced to suppuration, but turned hard and dry. She died on Dec. 26; ninth day of the disease. She was a delicate little girl. Had never been vaccinated until this time.

**CASE VII.** Turning now to the third and last of the cases that resulted from exposure to the body of H., we find our enemy in a more recondite form. W. M. A. was a stout, healthy man, aged 48 years; his occupation made it necessary for him to be at the depot every day, very early in the morning and late at night, causing great exposure to much inclement atmosphere. As above stated, he had helped to handle, wash and dress the body of H., on Nov. 21, and on Dec. 4—thirteenth day from the first date—he was taken ill. He felt feverish and indisposed, with much aching and heavy feeling of the extremities, on the fourth; the next day the fever was higher, and accompanied by very severe pain in the head, especially the back part, and aching in all parts of the body, causing great restlessness and distress. These symptoms became so severe by evening that the family became alarmed and sent out for medical aid. By accident, Dr. T. J. Rigg and myself arrived at the house at the same time; we were unanimous in pronouncing him to be a case of acute indigestion, caused by a bilious condition of the system, accompanied by neuralgia of the head, brought on by exposure; direct treatment accordingly. Dec. 6, no better; some hemorrhage of the nose and mouth, which increased during the night to an alarming extent. At the morning visit of the 7th we found our patient in a serious condition: blood constantly oozing from the mouth and nose; the contents of the bowels and bladder were also bloody, the face and front of the chest had an erysipelatous flush, due, we thought, to the retained and partially decomposing blood in the nose, which had been



tamponed to stop the hemorrhage. The rest of the body was thickly covered with pin-head-sized petechial spots; a few of these had been noticed the evening before. These livid-colored points, by evening, had developed into spots, in some place from  $\frac{1}{8}$  to  $\frac{1}{4}$  inch in diameter, giving the body a sort of purplish spotted appearance. But at no place was there any *elevated* points on the skin. The headache still continued, but the mind was clear, and continued so up to the last moment of life. The morning of the 8th found our patient with all the above symptoms aggravated, abdomen much distended by the accumulated blood in the bowels and bladder. The petechial discolorations had run into one another, forming irregularly shaped blotches; the body exhaling a fearfully disagreeable odor, resembling that of decaying animal matter. The stout and rugged man of five days ago rapidly sank and expired at 11 P. M., Dec. 8. During the whole course of his illness there was not a solitary point of eruption, or any other symptoms which would lead to the diagnosis of small-pox. It should be here remembered that at this date the case of Mrs. S. R. A. had not yet been recognized as being variola; and as there was no known case of this disease within many miles of the city, it is easily understood how unreasonable it would have been to have pronounced the above assemblage of symptoms small-pox. On the contrary, it will be noticed that all the symptoms, history and age of the patient point out the case as a severe form of *purpura hemorrhagica*. This is a disease that is not contagious. The body was held until the 11th, when a public funeral was held in the church, and a large number of people attended. He had never been vaccinated. Were it not for the history which I am now about to relate, we would never have suspected the true cause of A.'s death.

**CASE VIII.** Of the many persons who had been exposed to W. M. A. but four took the disease. These were his wife, a son and one daughter and R. A. The latter saw the patient but once; that was on the night of his death, and early on the morning of the 9th washed and dressed his body. On Dec. 23, a variolous eruption began to appear on him, preceded by several days of fever and severe headache. His case proved to be the form known as varioloid. He was a debilitated man of 53 years of age, and was suffering at the time from chronic diabetes. He succumbed to the two diseases on the 29th. He had been vaccinated near 23 years since, and again on Dec. 11, three days after exposure.]

**CASE IX.** Turning now to Mr. W. M. A.'s family we have three cases to chronicle. The first we will note is Mrs. A.; she is a delicate lady of 49 years. The eruption first made its appearance on her on Dec. 21—the thirteenth day after the death of her husband. She had been vaccinated when young, and again on Dec. 12. Her's was a mild case throughout.

**CASE X.** The daughter, Mrs. E. N. P., aged 24 years, was taken sick the same day as the mother; she had been in delicate health some months previous. Her's was a severe form of the confluent variety of the disease. She died January 5, 1882; thirteenth day of the disease after the eruption. She had never been vaccinated until Dec. 12, 1881.

**CASE XI.** D. A., son of W. M. A.; he is stout, healthy young man of 31 years; he had the confluent form of the disease, but recovered. For several days it was feared his case would take the same form as it did with his father; there was considerable hemorrhage from the nose; the eruption appeared to be suppressed for several days at the beginning. Had never been successfully vaccinated until Dec. 12, 1881; six days previous to the onset of the disease.

The history of this scourge on our city is unusually interesting for several reasons. First, it is a rare occurrence for a disease to visit a community in so masked a form as this did ours. The body of H. gave no evidence of the cause of his death; and the case of W. M. A. was totally devoid of a solitary pathognomonic or distinguishing symptom of small-pox. But on the other hand not one symptom in his case was wanting to characterize the disease known as *purpura hemorrhagica*, and yet the results which followed, as clearly and without a doubt, prove that he died of variola, that variety of the disease known by our authorities as *variola maligna* or *variola nigra*. Yet of the descriptions that I have been able to find of this variety, none of them give even a tolerably clear description of his case.

The case of Mrs. S. R. A. was also misleading by being preceded by chicken-pox, a disease which was at the time upon our community as an epidemic.

But the most important lesson that we can learn at this stage of our experience, is the importance of thorough vaccination. Of the fourteen persons who handled the body of J. B. H. in its transit from the depot to the coffin, all had previously been vaccinated except two; these two were Mrs. S. R. A. and W. M. A., who both took the disease and died. Of the remaining twelve, but one suffered any inconvenience; this was W. R., who was scarcely confined to bed at all. Of the six who have died, none had been vaccinated previous to exposure, except R. A.; and he can hardly be said to have died of small-pox alone. Of the five that have survived all had previously been vaccinated, except D. A., and his recovery is to be attributed to an iron constitution, for he has passed through a very violent form of the disease.

I think the most important factor in preventing a general spread of the disease is, that the sick and funerals were almost entirely attended by grown persons, nearly all of whom had been vaccinated. This general vaccination in this class of persons, had in turn been induced by the three separate small-pox scares that our town had during the last ten years.

It may not be without profit to look at the steps taken to suppress the disease. The first was to organize a board of health; this the city council did Dec. 20, 1881. This board consisted of two aldermen and two physicians: Messrs. W. P. Habberton and A. Späth, and Drs. T. J. Rigg and J. Schneck. This board held a meeting and adopted and put in force the directions given in the circular issued by the STATE BOARD OF HEALTH OF ILLINOIS. Issued a bulletin ordering every person not already vaccinated to have this done within three days; ordered all public meetings to be suspended, and quarantined and disinfected all houses where there were any persons with small-pox. The agents used for this purpose were carbolic acid, bromochloralum or a saturated solution of copperas;



these were used copiously in the rooms and all ejecta were immediately deodorized and disinfected. As soon as the disease had subsided in a house it was thoroughly fumigated with sulphurous acid, formed by burning a mixture of flower of sulphur and turpentine in the closed room, *a la* H. C. Wood.

The inmates of the quarantined houses were not allowed to leave the premises. In order to carry out this plan thoroughly all their needs were carried to a designated spot, whence they were afterwards taken into the house.

There is a question in the history of the disease on which our experience has an interesting bearing, viz: How many days from the date of infection until the eruption makes its appearance? The later authorities are very positive in their statements that it occurs on the fourteenth day, which is quite in contrast with the authorities of 15 to 20 years ago, who give a latitude of from 8 to 26 days. W. M. A., W. R. and Mrs. S. R. A. were all exposed to the body of H. but once, on Nov. 21, and on Dec. 5 the eruption showed itself on the two last named; while the petechial discoloration showed itself on the former.

R. A. washed and prepared the body of W. A. on the morning of Dec. 9—this is the only time he was exposed to him—and on Dec. 22 the eruption made its first appearance on him. In all the other cases there was exposure for several consecutive days; hence the dates are not so exact, but all tend to confirm the same opinion.

There is one other disputed point that our experience has a bearing on which I will mention: Is the disease communicable during the premonitory fever before the eruption appears? Equally good authorities hold diametrically opposite opinions on this point. We are inclined to the opinion that the truth lies in the middle ground, and that the person is not infectious until the eruption commences, but it must be borne in mind that the eruption makes its appearance in the throat from 12 to 20 hours before it is visible on the cutaneous surface. Our experience goes to confirm the opinion that during the first 24 hours of the fever there is little danger of the infection. Mrs. S. R. A. attended five public services during Sunday, Dec. 4, the first day of her fever, and not one person took the disease from her from this day's exposure, although two of these services were Sunday schools, where the majority were not protected by vaccination. A. is a member of the Mt. Carmel band, and met with them in their room on the evening of the first day's fever, and not one took the disease from him.

The last lesson of our experience that I will mention is: The worthlessness of much of the so-called bovine virus that the trade sent us, and this when the life of an individual often depends on its value. The only means we have of remedying this is to have our children vaccinated as soon as they are old enough to stand it, and this can usually be done during the first year. If all will do this there never will be a rush for virus.

Reporters: J. SCHNECK, M. D., attending physician, and chairman Mt. Carmel board of health; T. J. RIGG, M. D., attending physician; JOHN SITES, mayor; R. S. GORDON, county commissioner.

## WARREN COUNTY.

### KIRKWOOD:

March 17, 1881, the president of the board of trustees wrote for instructions concerning the suppression of small-pox, stating that the disease had been prevailing in Kirkwood "for the last five weeks," causing two deaths, and there then being two cases remaining.

It was subsequently ascertained that the disease was introduced by a railroad hand, who returned to his mother's house in this village about February 1, and was there treated for chicken-pox. February 23, five cases of small-pox were found in this family, among them a young bride from Prophetstown, Whiteside county. No other details have been received.

Reporter: G. W. KELLOGG, president board of village trustees.

### MONMOUTH:

See *Floyd Township*.

### CAMERON:

See *Floyd Township*.

### FLOYD TOWNSHIP:

The origin of the outbreak in Floyd township is attributed to Burlington, Ia. The first recognized case occurred March 21, 1881, in a family, one of the members of which had been on a visit to her father's in Monmouth. During this visit a younger sister was married at her parents', in Monmouth, and a short time previous a brother had been sick in the same house with an eruptive disease which, as in the Kirkwood case, had been pronounced variella. From this first recognized case the spread of the remaining cases was distinctly traceable.

There were in all, between March 21, and May 25, when the last case died, a total of 9 cases and 5 deaths. No other details have been furnished, except those tabulated.

Reporters: THOMAS TEMPLE, M. D., Cameron, attending physician; ROBERT ATKINSON, supervisor Floyd township.

## WILL COUNTY.

### BRAIDWOOD:

Reports from this place are very meagre and incomplete. In October, 1881, a case of small-pox was introduced from Chicago, at the termination of which the nurse took to his home the clothing, bedding, etc., used by the patient, and infected his family. During

their illness, which does not seem to have been reported, this nurse "ran all over the town and it was some weeks before the authorities were notified." In all, up to January 5, 1882, twenty cases were reported, but this is understood not to include the entire number. No report of the deaths or of cost has been furnished.

Reporters: G. E. WILLARD, M. D., attending physician; DANIEL McLAUGHLIN, mayor.

#### MOKENA:

During October and November, 1881, there were three cases of small-pox—one unmodified and two modified—in Mokena. There was much excitement and business was practically suspended for about eighteen days. No clinical history of the cases has been furnished. The cost to private individuals—those afflicted and their families—is reported at \$550; of gratis vaccination, etc., \$40.25, and constructive losses to business, etc., \$9,500; making a total of \$10,090.25 for 3 cases during 18 days.

Reporters: WM. BECKER, M. D., president board of health; O. McGOVNEY, president board of trustees.

#### MONEE:

A farmer from Monee, visiting Chicago in December, 1881, spent some time in a saloon in that city where, in an upper room of the same building, there was a case of small-pox. He returned to his home, and on January 1, 1882, a physician, called to amputate a finger, found him in the desquamative stage of modified small-pox. No precautions having been taken during his illness there resulted eight other cases in Monee and one in the town of Crete, up to the 19th of March; none fatal. The cost of 3 cases, of which returns have been received, is put at \$135.

Reporters: Dr. E. WERNIGK, attending physician; EDWARD R. FREEZE, town clerk.

#### CRETE:

A woman, living in the town of Crete, visited one of the Monee cases in the early part of January, 1882, and came down with an attack of varioloid in the usual time. Had been vaccinated 61 or 62 years previous, but not since. Recovered after a brief illness.

About the beginning of April, 1882, another case occurred in this town, the contagion being brought into a farmer's family by a hired man, who had been visiting his brother's family in Chicago, and in which family there was a child sick with small-pox. Two unprotected children in the farmer's family were vaccinated successfully during the eruptive stage of the father's attack; the mother and all others in the family had been successfully vaccinated before the father was taken ill, and no other cases resulted.

Reporter: Dr. E. WERNIGK, M. Monee, attending physician.

#### PEOTONE:

A mild case of varioloid left Chicago about the middle of February, 1882, to escape being sent to the small-pox hospital, and came to Peotone. March 2 his room-mate at the latter place was found in the febrile stage of confluent small-pox, dying on the fourteenth day. A child, three years of age, was exposed to this latter case and had a mild attack of modified small-pox, having been successfully vaccinated with bovine virus about two months before exposure. Both cases were carefully isolated and other precautions adopted, and there was no spread of the disease. Cost, \$360.

Reporters: E. H. SAMMONS, M. D., president local board of health, attending physician; MARTIN COLLINS, president board of trustees.

#### HOMER TOWNSHIP:

A domestic, at service in Chicago, returned to her home in Homer township, just as the eruptive stage of small-pox was beginning. She died, March 11, 1882, on the twelfth day of the disease; confluent type; never vaccinated. Her mother-in-law, who nursed her, had a mild attack, modified by vaccination in childhood. Five other cases, making a total of 7, with 4 deaths, are reported by the town clerk as occurring between March 1 and the middle of May, but no other details have been furnished. Total cost, \$442.

Reporters: J. B. ROOD, M. D., Lemont, and F. W. SCHOOP, Lockport, attending physicians; SAMUEL W. JONES, town clerk.

#### JOLIET:

Prior to the outbreak in the spring of 1882, tramps, in different stages of the disease, were picked up in the streets of Joliet on three different occasions; these were promptly removed to the small-pox hospital, and no other cases resulted from any of them. This immunity, probably, had something to do with the comparative indifference which followed the appearance of the initial cases of the serious and wide-spread outbreak which subsequently occurred.

In the early part of March, 1882, the son of a German gunsmith in Joliet returned to his father's house from Chicago. On the 18th of the month his mother and sister were taken down with small-pox of a very virulent type, confluent and hemorrhagic, and died on the tenth and twelfth days, respectively. During their illness they were visited by a neighbor, who came down with the disease about April 6th, and died after a short illness.

"There was very little precaution taken with this case. A few hours after his death from confluent small-pox the blankets and sheets upon which he had lain during his illness were hung out on lines in a yard in close proximity to a public street. There is evidence to prove that the disease was spread directly from this source, in one case being carried by a public scholar a distance of fully a mile.

In a short time excitement ran very high; neighboring towns quarantined against the city; the city council ordered schools, churches and public gatherings suspended; special policemen were detailed to guard the infected houses; the STATE BOARD OF HEALTH was appealed to, and the Secretary made a personal visit to the locality. The rules and regulations of the BOARD were adopted and vigorously enforced, and by the close of June the last case was discharged from hospital.

During this period, March 18 to June 30, there was a total of 57 cases reported, with 15 deaths, and the cost is put at \$26,402.97, of which sum \$15,525 is constructive and estimated. There are some anomalies in the tabulated reports, of which no sufficient explanation has been received. See Nos. 1051-1101, inclusive, Tabular Statement.

Reporters: G. H. HOSMER, M. D., and J. R. CASEY, M. D., attending physicians; ROBERT T. KELLEY, city clerk.

#### BEECHER:

A small-pox convalescent from Chicago, discharged from hospital one month previously, returned to her home in Beecher about the last of March, 1881; in the usual time her brother was taken down with an attack of modified small-pox. No spread.

May 1, 1881, an immigrant from Stettin landed in New York, and thence traveled to Beecher. On the 18th May the wife was found in the febrile stage of confluent small-pox and died on the 26th. Her husband was taken down June 8, and died on 14th—profuse hemorrhage. No connection between these cases and the one first recorded. The immigrants had been vaccinated in childhood and exhibited "bad" vaccinal cicatrices.

Reporter: THEODORE W. SCHAEFER, M. D., attending physician.

### WINNEBAGO COUNTY.

#### ROCKFORD:

A child from from Milwaukee, Wis., was taken sick, and died soon after its arrival (early part of May, 1881) with what was supposed to be chicken-pox. The woman who prepared the body for burial, and four others directly exposed, contracted small-pox, two of them dying. Six other cases resulted from this first group before the outbreak was suppressed.

About the middle of the following October a German watch-case maker, recently from Chicago, came down with the disease. He infected his attending physician, who had been vaccinated in childhood, as had also the German, and both recovered. No other cases from this introduction.

In March, 1882, there was a third access of the contagion, introduced by a resident of Rockford who contracted the disease in Chicago and returned to his home, during the early stage. Three others were infected from this case, one of whom died in Rockford, and one went to Beloit, Wis., and there died.

Between May 1, 1881, and August 30, 1882, there were, in all, 23 cases and 3 deaths, the deaths being among seven unvaccinated individuals. Total cost to city for hospital expenses, etc., \$3,438.90.

Reporters: L. A. CLARK, M. D., D. S. CLARK, M. D., and H. M. SABIN, M. D., attending physicians; S. P. CRAWFORD, mayor; E. K. CONKLING, town clerk.

#### LAONA TOWNSHIP:

December 23d, 1881, a sailor recently returned from Chicago to spend the winter in Laona, was taken ill and died on the 31st of unmodified confluent small-pox. Of those exposed, during the two or three days before the character of his sickness was determined, seven contracted the disease—three unmodified and four modified. Of the former two died. Proper preventive measures were employed as soon as the diagnosis of the first case was made, and there was no spread from any of the subsequent cases. Total reported cost, \$511.

Reporters: S. B. VAN VALZAH, M. D., Durand, attending physician; PETER JOHNSON, supervisor; ALONZO SMITH, clerk town board of health.

#### WINNEBAGO:

A tramp, from Harvard junction, came to Winnebago sick, in February, 1882. His disease proved to be small-pox, and from him three others contracted the disease. None of the four had ever been vaccinated. Cost of the four cases to the county, \$350.

### WOODFORD COUNTY.

#### GREENE TOWNSHIP:

In March, 1882, a German immigrant arrived in Benson, in Greene township, and a few days later was taken ill. His attending physician, resident at Benson, diagnosed the disease scarlet fever; but in about three weeks was himself attacked with modified small-pox, and communicated the disease to his own family and to a woman who called on him. This patient miscarried, during febrile stage, at about fourth month of gestation. From this latter case resulted two others, one fatal. Total reported cost to individuals, \$250.

Reporter: T. J. ROSENBERG, M. D., Roanoke, attending physician.

#### BENSON:

See Greene Township.



TABULAR STATEMENT—Showing the Sex, Age, Nativity, Occupation, Vaccinal History, Character of Attack, Duration of Illness, and Result in 1,100 Cases of Small-Pox.

NOTES.—Italicized letters in the column "Sex" indicate colored persons.—In the columns "Virus," the initials "B" and "H" mean *Bonne* and *Humanized*, respectively.—In the column "Result" (Vaccinal History), the initials have the following meaning: "T"—*Typical cicatrice*; "M"—*Modified cicatrice*; "F"—*Failure*.—The figures following these initials indicate the number of visible cicatrices.—In the column "Result" (Vaccinated after Exposure), the initials "F" and "S" mean *Failure* and *Successful*, respectively.—"Ch." and "Inf." mean *In Childhood* and *In Infancy*, respectively.

Number	Sex	Age	Nativity.	Occupation.	VACCINAL HISTORY.				VACCINATED AFTER EXPOSURE		Character of attack.	Duration of illness—days	Result.
					When vaccinated.	Where vaccinated.	Virus...	Result.					
1	M	24	United States	Railway service	Ch	United States	H	T	B	F	Discrete.	24	Recovery.
2	M	21	United States	Medical student	Never	United States	H	T	B	F	Discrete.	10	Death
3	M	25	Canada	Medical student	1860	United States	H	T	B	F	Discrete.	31	Recovery.
4	M	49	United States	Carpenter	1852	United States	H	T	B	F	Discrete.	10	Recovery.
5	F	10	United States	Public scholar	1881	United States	H	T	B	F	Discrete.	8	Recovery.
6	F	27	United States	Farmer	1862	United States	H	T	B	F	Discrete.	10	Recovery.
7	F	1	United States	Farmer	1881	United States	H	T	B	F	Discrete.	7	Recovery.
8	M	35	United States	Physician	Ch	United States	H	T	B	F	Discrete.	7	Recovery.
9	F	31	United States	Housewife	1881	United States	H	T	B	F	Discrete.	8	Recovery.
10	F	15	United States	Housewife	1881	United States	H	T	B	F	Discrete.	10	Recovery.
11	M	37	United States	Carpenter	Ch	United States	H	T	B	F	Discrete.	9	Recovery.
12	M	23	United States	Public scholar	1881	United States	B	M	B	F	Discrete.	8	Recovery.
13	F	23	United States	Housewife	1881	United States	B	M	B	F	Discrete.	8	Recovery.
14	M	12	United States	Public scholar	1881	United States	B	M	B	F	Discrete.	9	Recovery.
15	M	2	United States	Public scholar	1881	United States	B	M	B	F	Discrete.	9	Recovery.
16	M	2	United States	Housewife	1881	United States	B	M	B	F	Discrete.	9	Recovery.
17	F	45	United States	Housewife	Ch	United States	H	T	B	F	Discrete.	7	Recovery.
18	M	6	United States	Housewife	1881	United States	B	M	B	F	Discrete.	7	Recovery.
19	M	15	United States	Laborer	Ch	United States	B	M	B	F	Discrete.	28	Recovery.
20	M	15	United States	Laborer	Never	before exposure.	B	F	B	F	Discrete.	28	Recovery.
21	M	12	United States	Laborer	Never	before exposure.	B	F	B	F	Discrete.	60	Recovery.
22	M	8	United States	Private scholar	Ch	United States	B	T 2	B	F	Discrete.	14	Death
23	F	19	United States	Domestic	Ch	United States	B	T 2	B	F	Discrete.	60	Recovery.
24	F	43	United States	Housewife	Never	before exposure.	B	T 2	B	F	Discrete.	59	Recovery.
25	F	46	Germany	Housewife	Never	before exposure.	H	T 6	B	F	Discrete.	53	Recovery.
26	F	14	United States	Housewife	1850	Germany	H	T 6	B	F	Discrete.	53	Recovery.
27	F	14	United States	Laborer	Never	before exposure.	B	F	B	F	Discrete.	54	Recovery.
28	M	19	United States	Laborer	Never	before exposure.	B	F	B	F	Discrete.	46	Recovery.
29	M	12	United States	Housewife	Never	before exposure.	B	F	B	F	Discrete.	55	Recovery.
30	F	43	United States	Housewife	Never	before exposure.	B	F	B	F	Discrete.	48	Recovery.



30	M	45 Nova Scotia.....	Carpenter.....	Never	before exposure.	Discrete.....	45 Recovery.....
31	M	23 United States.....	Brakeman.....	Never	before exposure.	Discrete.....	42 Recovery.....
32	F	76 Germany.....	Housewife.....	Ch	Germany.....	Discrete.....	24 Recovery.....
33	M	29 Germany.....	Laborer.....	Never	before exposure.	Discrete.....	50 Recovery.....
34	M	49 Germany.....	Undertaker.....	Never	before exposure.	Discrete.....	47 Recovery.....
35	M	25 United States.....	Brakeman.....	Never	before exposure.	Discrete.....	10 Death.....
36	F	41 United States.....	Housewife.....	Never	before exposure.	Discrete.....	33 Recovery.....
37	F	3 United States.....	Housewife.....	Never	before exposure.	Discrete.....	31 Death.....
38	F	43 Germany.....	Housewife.....	Ch	Germany.....	Discrete.....	32 Recovery.....
39	F	53 United States.....	Domestic.....	Ch	United States.....	Discrete.....	34 Recovery.....
40	M	21 United States.....	Laborer.....	Never	before exposure.	Discrete.....	31 Recovery.....
41	M	35 United States.....	River service.....	Never	(See note)	Hemorrhagic.....	6 Death.....
42	M	27 United States.....	River service.....	Never	before exposure.	Discrete.....	19 Recovery.....
43	M	19 United States.....	River service.....	Never	(See note)	Discrete.....	16 Recovery.....
44	M	31 United States.....	River service.....	Never	before exposure.	Discrete.....	13 Death.....
45	M	23 United States.....	River service.....	Never	before exposure.	Discrete.....	17 Recovery.....
46	M	21 United States.....	River service.....	Never	before exposure.	Discrete.....	27 Recovery.....
47	M	23 United States.....	River service.....	Never	(See note)	Discrete.....	10 Death.....
48	M	17 United States.....	River service.....	Never	before exposure.	Discrete.....	19 Death.....
49	M	22 United States.....	River service.....	1860	United States.....	Discrete.....	13 Recovery.....
50	M	23 United States.....	River service.....	Never	before exposure.	Discrete.....	28 Recovery.....
51	M	23 United States.....	River service.....	Never	before exposure.	Discrete.....	28 Recovery.....
52	M	23 United States.....	River service.....	Never	before exposure.	Hemorrhagic.....	8 Death.....
53	M	36 United States.....	River service.....	Never	before exposure.	Discrete.....	18 Recovery.....
54	M	26 United States.....	River service.....	Never	before exposure.	Hemorrhagic.....	15 Death.....
55	F	39 United States.....	River service.....	Never	before exposure.	Discrete.....	14 Death.....
56	M	21 United States.....	River service.....	Never	before exposure.	Discrete.....	10 Death.....
57	M	24 United States.....	River service.....	Never	before exposure.	Hemorrhagic.....	4 Death.....
58	M	17 United States.....	River service.....	Never	before exposure.	Discrete.....	14 Recovery.....
59	M	25 United States.....	River service.....	Never	(See note)	Discrete.....	29 Recovery.....
60	M	18 United States.....	River service.....	Never	(See note)	Hemorrhagic.....	5 Death.....
61	M	18 United States.....	River service.....	Never	(See note)	Hemorrhagic.....	5 Death.....
62	M	39 United States.....	River service.....	1872	United States.....	Discrete.....	7 Recovery.....

NOTES.—No. 32 "vaccinated in Germany when a child (some seventy years previous; no cicatrix visible. Revaccinated April 4, 1882—during febrile stage of attack—and seemed to run its course with the disease."—No. 41 was brought to hospital comatose, and no other information was obtained.—No. 42 was in hospital, under treatment for tertiary syphilis and pulmonary phthisis, when disease was contracted. Vaccinated on day of exposure; vaccinal fever began on twelfth day after, "and pustule developed along with small-pox."—No. 43 vaccinated by marine-hospital surgeon in St. Louis "a short time previous, and had a partially healed sore on arm." Was admitted to hospital suffering from phlegmonous erysipelas, and developed small-pox on seventh day after admission.—No. 44, a convalescent from typhoid fever, was exposed to a city case of variola who remained in his ward some hours. Was vaccinated next day—"took after small-pox s.t. in."—No. 45 in hospital for ositis, when disease was contracted.—No. 46 in hospital for ulcers of the liver, when disease was contracted.—No. 47 "had been" vaccinated by marine-hospital surgeon in St. Louis about three or four weeks before; an excoriated ulcer on his arm as big as a silver dollar.—No. 53 was in hospital with compound fracture of the leg, when vaccinated two days after only known exposure; vaccinia and variola appeared simultaneously after twenty-one days' incubation.—No. 57, when convalescing from pneumonia, was allowed to visit small-pox ward. Had previously had small-pox. Passed from incubative stage into febrile stage in comatose condition, and died during the second stage.—No. 58. Marine-hospital patient—secondary syphilis. Vaccinated soon after exposure; attack "very mild."—No. 59 had been vaccinated by marine-hospital surgeon in St. Louis, five or six weeks previous to attack. Arm still sore on admission—"a very bad arm, two sores."—No. 60 "stated that he was vaccinated in St. Louis, about six weeks previous, by a surgeon in the U. S. Marine-Hospital Service. Had a large ulcer, one and one-half inches in diameter, on his arm, and a smaller one lower down."—No. 61 "vaccinated in Cincinnati in March, 1882, [disease] detected in incubative stage May 25, 1882, and had a large, but not good, scar. Was vaccinated May 16, with bovine virus; developed small-pox."—No. 62 "entered hospital with phlegmonous erysipelas, and was vaccinated on admission; on the 9th day developed small-pox."—All these cases, Nos. 41-62, inclusive, were patients of the U. S. Marine-Hospital Service.

Tabular Statement—Continued.

Number	Sex	Age	Nativity.	Occupation.	VACCINAL HISTORY.				VACCI- NATED AFTER EXPOSURE.		Character of attack.	Duration of ill- ness—days.....	Result.
					When vac- cinated.	Where vaccinated.	Virus..	Result	Virus..	Result			
63	M	50	United States	Farmer	Ch...	United States.	H	T			Discrete.	16	Recovery.
64	F	50	United States	Housewife	Never	United States.	H	T			Hemorrhagic.	6	Death.
65	F	44	United States	Housewife	Never	United States.	H	M			Discrete.	20	Recovery.
66	F	7	United States		Never	United States.	H	T			Confluent.	13	Death.
67	F	19	United States		1878	United States.	H	T	B	F	Discrete.	14	Recovery.
68	F	30	United States	Farmer	1877	United States.	H	T	B	F	Discrete.	10	Recovery.
69	M	49	United States	Laborer	Never	United States.	H	T			Confluent.	9	Death.
70	M	49	United States		1888	United States.	H	T			Discrete.	17	Recovery.
71	F	18	United States		Never	before exposure.	H	T	H	S	Discrete.	13	Recovery.
72	F	50	Germany	Farmer	1831	Germany.	H	T			Discrete.	16	Recovery.
73	F	16	United States		1871	United States.	H	T <sup>2</sup>	B	F	Discrete.	16	Recovery.
74	F	16	United States	Housewife	1877	United States.	H	M	B	F	Discrete.	16	Recovery.
75	F	74	United States		1871	United States.	H	T <sup>2</sup>	B	F	Discrete.	12	Recovery.
76	M	9	United States		Never	before exposure.	H	T	B	F	Discrete.	16	Recovery.
77	M	13	United States		Never	before exposure.	H	T	B	F	Discrete.	16	Death.
78	F	12	United States		Never	before exposure.	H	T	B	F	Hemorrhagic.	6	Death.
79	F	42	United States		Never	before exposure.	H	T			Discrete.	16	Recovery.
80	F	12	United States	Farmer	1855	United States.	H	T			Discrete.	13	Recovery.
81	F	36	United States	Housewife	1872	United States.	H	T			Discrete.	13	Recovery.
82	F	7	United States		Never	United States.	H	T			Discrete.	8	Death.
83	F	15	United States	Farmer	Never	United States.	H	T			Confluent.	6	Death.
84	M	22	United States	Laborer	1862	before exposure.	H	T			Discrete.	14	Recovery.
85	M	20	United States		Never	before exposure.	H	T	B	S	Discrete.	12	Recovery.
86	F	33	United States	Housewife	Never	before exposure.	H	T	B	F	Discrete.	42	Death.
87	F	42	United States		Never	before exposure.	H	T <sup>4</sup>	B	F	Discrete.	27	Recovery.
88	F	42	United States	Housewife	1875	United States.	H	T <sup>3</sup>			Discrete.	7	Recovery.
89	F	10	United States		1875	United States.	H	T <sup>3</sup>			Discrete.	30	Recovery.
90	F	22	United States	Housewife	Never	before exposure.	H	T <sup>2</sup>			Confluent.	31	Recovery.
91	M	35	United States	Newsboy	Ch...	United States.	H	T <sup>2</sup>	B	F	Discrete.	31	Recovery.
92	F	7	United States	Latdress	Never	before exposure.	H	T <sup>2</sup>	B	S	Discrete.	31	Recovery.
93	F	92	United States	Public scholar.	Never	before exposure.	H	T	B	S	Discrete.	30	Recovery.
94	M	5	United States		Ch...	United States.	H	T	B	S	Discrete.	30	Recovery.
95	M	35	United States	Farmer	Never	before exposure.	H	T			Discrete.	31	Recovery.
96	M	30	United States	Public scholar	Never	before exposure.	H	T			Discrete.	31	Recovery.
97	M	9	United States	Railway service.	1872	United States.	H	T			Discrete.	20	Recovery.
98	F	17	United States	Farmer	Never	United States.	H	T <sup>2</sup>	B	S	Confluent.	14	Recovery.
99	F	26	United States	Domestic	1872	United States.	H	T <sup>3</sup>	B	S	Discrete.	17	Recovery.
	F	66	United States	Housewife	Ch...	United States.	H	T <sup>3</sup>			Discrete.		

100	M	68 United States.	Merchant.	Ch.	United States.	M	Discrete.	10 Recovery.
101	M	25 United States.	River service.	Never	Never		Hemorrhagic.	6 Death.
102	M	48 United States.	Preacher.	Ch.	United States.	M	Discrete.	18 Death.
103	F	68 United States.	Housewife.	Ch.	United States.		Discrete.	9 Death.
104	F	23 United States.	Triumph.	Never	before exposure.	B	Discrete.	9 Death.
105	M	46 United States.	Laborer.	Never	before exposure.	B	Discrete.	21 Recovery.
106	M	30 United States.	Laborer.	Never	before exposure.		Discrete.	30 Recovery.
107	M	13 United States.	Laborer.	Ch.	Germany.	M	Discrete.	18 Recovery.
108	M	45 Germany.	Laborer.	Ch.	Ireland.	T <sup>2</sup>	Discrete.	12 Recovery.
109	M	35 Ireland.	Laborer.	Ch.	United States.	H	Discrete.	42 Recovery.
110	F	19 United States.	Domestic.	Ch.	United States.	H	Discrete.	12 Death.
111	F	16w United States.	Farmer.	Never	United States.	M	Discrete.	18 Recovery.
112	M	30 United States.	Housewife.	Ch.	United States.	H	Discrete.	15 Recovery.
113	F	27 England.	Housewife.	Ch.	United States.	T	Discrete.	14 Recovery.
114	F	22 United States.	Domestic.	1881	United States.	B	Discrete.	25 Recovery.
115	M	5 United States.		Never	before exposure.		Discrete.	20 Recovery.
116	F	4 United States.		Never	before exposure.	B	Discrete.	20 Recovery.
117	F	3 United States.		Never	before exposure.		Discrete.	18 Recovery.
118	F	9m United States.	Farmer.	Ch.	Germany.		Discrete.	15 Recovery.
119	F	60 Germany.	Farmer.	Ch.	Germany.	H	Discrete.	24 Recovery.
120	M	42 Germany.	Private scholar.	1870	United States.	T	Discrete.	18 Recovery.
121	M	121 United States.	Bricklayer.	1872	United States.	F	Discrete.	21 Recovery.
122	M	34 United States.	Bricklayer.	Ch.	United States.	M <sup>2</sup>	Discrete.	21 Recovery.
123	M	10 United States.	Farmer.	Ch.	United States.	F	Discrete.	17 Recovery.
124	M	17 Germany.	Farmer.	Ch.	Germany.	H	Discrete.	12 Death.
125	M	40 Germany.	Public scholar.	Never	United States.	T <sup>2</sup>	Discrete.	7 Recovery.
126	M	9 United States.	Public scholar.	1881	United States.	B	Discrete.	

No. 70, "vaccinated at 5 years, humanized virus; result typical; re-vaccinated in the army with good result."—No. 71: "This girl and her brother were vaccinated (primary) after four days' continuous exposure to their mother; humanized virus; typical clearness. Twenty days after the daughter was taken down with a very mild attack of modified small-pox. The son escaped entirely."—No. 72, vaccinated 2 days after exposure; boy's after exposure with bovine virus; result, failure.—No. 73, "vaccinated at the age of 5 years; humanized virus; result, typical clearness; re-vaccinated two days after exposure with bovine virus; result, failure."—No. 74, "vaccinated when 15 years old, with humanized virus; states that she suffered with violent inflammation of the arm and much enlargement of lymphatics. My experience goes to show that where there is much constitutional disturbance, with local irritation, severe inflammatory action and suppuration, the operation is not profitable against small-pox, and the vaccination should be repeated until normal vaccinia is obtained."—Nos. 86 and 87 had never been vaccinated until after exposure to the contagion in a boarding-house in Chicago; vaccinated during febrile stage; bovine virus; unsuccessful.—Nos. 88 and 89 were vaccinated in infancy and presented typical clearness; re-vaccinated seven years previous to this attack; result, modified. The disease was very mild in both cases; but few progress; ill only a few days. Both were re-vaccinated as soon as Cases 86 and 87 were detected.—December 25. Result, uncertain, as to effect on progress of disease.—The "duration of illness" given for Nos. 90-95, inclusive, is misleading. The attending physician states that nearly all the cases were very mild. No. 94, for example, being reported in one connection as "sick three or four days." The duration stated evidently covers the entire period of quarantine.—Nos. 99 and 100 were both vaccinated to Chicago, whither of 1881-2; No. 99, failure; No. 100, modified clearness. Bovine virus used in re-vaccination.—No. 103 had been vaccinated in infancy; exhibited one modified clearness.—No. 104 was vaccinated five days after exposure to Case No. 102; had typical vaccinia, modifying the virulose course—but died from hemorrhage following a four months' miscarriage.—No. 106, husband of No. 104, vaccinated three days earlier than his wife; exposed at same time. All these persons, Nos. 102-106, inclusive, were negroes.—No. 121, "one bad scar—not characteristic of vaccination." No other data.—No. 122, two modified clearness from primary vaccination in childhood; one typical, one modified, from re-vaccination when about 14. Profuse eruption, but no suppuration—vesicles drying up; attack greatly shortened.—No. 123, two bad scars, not at all characteristic.—No. 124, not vaccinated; a typical and I modified scars from primary vaccination in childhood. Attack somewhat modified thereby.—No. 125, never vaccinated, German physician objecting because of presence of epilepsy.—No. 126, "vaccinated at public school, Grosso Point, Cook county; bovine virus; two typical scars; a mild attack."



Tabular Statement—Continued.

Number	Sex	Age	Nativity.	Occupation.	VACCINAL HISTORY.			VACCI- NATED AFTER EXPOSURE.	Character of attack.	Duration of ill- ness—days.....	Result.
					When vac- cinated.	Where vaccinated.	Virus...	Result.			
127	M	4	United States.	Housewife.	Never	before exposure.	H	B	Discrete.	12	Recovery.
128	F	30	Germany.	Farmer.	Ch.	Germany.	T <sup>4</sup>	F	Discrete.	7	Recovery.
129	M	42	Germany.	Housewife.	Ch.	Germany.	T <sup>2</sup>	F	Discrete.	7	Recovery.
130	F	41	Germany.	Housewife.	Ch.	Germany.	H	B	Discrete.	13	Recovery.
131	F	3	United States.		Never	before exposure.			Discrete.	19	Recovery.
132	F	5m.	United States.	Errand-boy.	Ch.	United States.	F		Confluent.	24	Death.
133	F	15	United States.		Never	before exposure.		H	Discrete.	45	Recovery.
134	F	6m.	United States.	Farmer.	Ch.	United States.	M <sup>2</sup>	S	Discrete.	12	Recovery.
135	M	29	United States.		Ch.	United States.	M	B	Discrete.	9	Recovery.
136	M	82	United States.	Housewife.	Ch.	United States.	H	B	Discrete.	14	Recovery.
137	F	35	United States.	Laborer.	Ch.	United States.	F	S	Discrete.	20	Recovery.
138	F	17	United States.	Public scholar.	Ch.	United States.	F		Confluent.	12	Death.
139	F	13	United States.	Public scholar.	Never	United States.			Hemorrhagic.	8	Death.
140	F	4	United States.		Never	United States.			Confluent.	11	Death.
141	F	23	United States.	Spinster.	Ch.	United States.	M <sup>4</sup>		Discrete.	18	Recovery.
142	F	36	Germany.	Laborer.	Ch.	Germany.	H	B	Confluent.	32	Recovery.
143	F	22	Germany.	Railway service.	Ch.	Germany.	T <sup>4</sup>	F	Discrete.	42	Recovery.
144	M	40	Germany.	Housewife.	Ch.	Germany.	H		Confluent.	27	Recovery.
145	M	26	United States.	Housewife.	Ch.	United States.	T		Discrete.	31	Recovery.
146	F	30	Ireland.	Iron puddler.	Never	United States.			Hemorrhagic.	13	Recovery.
147	M	16	Ireland.	Laborer.	Never	United States.	H	F	Hemorrhagic.	9	Death.
148	F	15	United States.	Housewife.	Ch.	United States.	F		Hemorrhagic.	9	Death.
149	F	16	United States.	Housewife.	Ch.	United States.	F		Discrete.	16	Death.
150	M	4	United States.	Public scholar.	Never	United States.	B	F	Discrete.	24	Recovery.
151	M	13	United States.	Public scholar.	Ch.	United States.	F	F	Confluent.	22	Recovery.
152	M	11	United States.	Public scholar.	Ch.	United States.	B	B	Confluent.	12	Death.
153	M	23	England.	Brick mason.	Ch.	England.	H	T <sup>6</sup>	Confluent.	35	Recovery.
154	F	1	United States.	Public scholar.	Never	before exposure.		B	Confluent.	16	Recovery.
155	M	29	Ireland.	Laborer.	Ch.	Ireland.	H	S	Confluent.	40	Recovery.
156	M	20	United States.	Railway service.	Ch.	United States.	T <sup>2</sup>		Discrete.	14	Recovery.
157	M	27	Ireland.	Iron puddler.	Ch.	Ireland.	T <sup>2</sup>		Discrete.	19	Recovery.
158	M	30	Ireland.	Iron puddler.	Ch.	Ireland.	H	M <sup>2</sup>	Discrete.	18	Recovery.
159	M	33	Ireland.	Iron puddler.	Ch.	Ireland.	H		Confluent.	18	Recovery.
160	M	25	United States.	Laborer.	Ch.	before exposure.	H	B	Discrete.	18	Recovery.
161	M	26	Ireland.	Iron puddler.	Never	United States.		S	Confluent.	10	Death.
162	M	40	United States.	Railway service.	Never	United States.			Confluent.	12	Death.
163	M	26	Germany.	Laborer.	Ch.	United States.	H		Discrete.	22	Recovery.



164	M	32	United States	Sewer builder	Never	Confident	31	Recovery
165	F	26	Sweden	Domestic	Never	Discrete	20	Recovery
166	M	20	Ireland	Laborer	Never	Discrete	18	Recovery
167	M	13	United States	.....	Never	Confident	9	Death
168	M	12	United States	.....	Never	Discrete	22	Recovery
169	M	31	England	Carpenter	Never	Discrete	18	Death
170	F	1	Holland	.....	Never	Discrete	15	Death
171	F	2	Sweden	Domestic	Never	Discrete	20	Recovery
172	F	23	Sweden	Housewife	Never	Discrete	20	Recovery
173	F	25	Sweden	.....	Never	Discrete	20	Recovery
174	M	1	United States	Laborer	Never	Discrete	24	Recovery
175	M	45	Germany	Laborer	Never	Discrete	18	Recovery
176	M	28	Holland	Laborer	Never	Discrete	24	Recovery
177	M	39	United States	Housewife	Never	Discrete	26	Recovery
178	F	40	Denmark	.....	Ch.	Confident	10	Death
179	F	29	United States	Laborer	Never	Discrete	18	Recovery
180	M	45	Sweden	Shoemaker	Ch.	Discrete	17	Recovery
181	M	42	Denmark	.....	Ch.	Discrete	22	Recovery
182	F	4	Wales	.....	Never	Confident	21	Recovery
183	F	21	Holland	Housewife	Never	Confident	24	Recovery
184	M	35	Germany	Laborer	Ch.	Confident	10	Death
185	M	16	United States	.....	Never	Hemorrhagic	14	Recovery
186	F	5	United States	Painter	Never	Discrete	17	Death
187	M	23	United States	Laborer	Never	Hemorrhagic	22	Recovery
188	M	27	Holland	.....	Never	Confident	14	Recovery
189	M	2	Holland	Broker	Never	Discrete	6	Death
190	M	38	United States	.....	Never	Discrete	17	Death
191	F	191	United States	Housewife	Never	Discrete	22	Recovery
192	F	26	Ireland	.....	1880	Discrete	14	Recovery
193	M	23	Ireland	Laborer	Never	Hemorrhagic	8	Death
194	M	17	Sweden	.....	Never	Discrete	20	Death
195	M	3	United States	Laborer	Never	Hemorrhagic	18	Recovery
196	M	24	Holland	.....	Never	Confident	4	Death
197	M	27	United States	Machinist	Never	Hemorrhagic	68	Recovery

NOTES.—No. 127, "vaccinated (after exposure,] bovine virus, May 28, 1882, failure; revaccinated, bovine virus, June 3, modified result. Attack seems to have been slightly modified thereby."—No. 124, "vaccinated when a child in Germany with humanized virus; four typical cases. At most only six or seven weeks over the whole body."—No. 129 similar to No. 124.—Nos. 130, 131 and 132, see narrative, cases in Niles township, Cook county.—No. 133, see case of errand-boy, Evanston township, Cook county.—No. 134, "vaccinated (after exposure,] with humanized lymph from a bovine vaccination; typical result, broadly modifying severity of attack."—No. 137, "No marks of first vaccination. Was vaccinated fifth day after exposure; greatly modified the attack."—No. 138, "Would not allow vaccination after exposure or attack."—No. 142, "Vaccinated when a child, and again in December, 1881, about six weeks before attack. Results in both cases modified.—No. 143, "Was delivered of a healthy eight months infant on eighth day of disease. Child was at once vaccinated with bovine virus; 'worked well' and child escaped."—No. 144, "No clearities visible, thence exposure to No. 149, a fatal case of gangrenous variola. Remained in attendance until death occurred, two weeks after his vaccination, when he was found in the exudative stage of the disease modified by the successful vaccination, and was discharged from hospital convalescent on the eighteenth day."—No. 164, "Deranged for three weeks, and after partial recovery, droopy of right leg set in, which continued for three months."—No. 170, Infant in a family of newly-arrived Holland immigrants.—No. 184, Attempted revaccination with bovine virus three weeks before attack; was unsuccessful.—No. 195, Death from cerebral congestion during febrile stage.

Tabular Statement—Continued.

Number	Sex	Age	Nativity.	Occupation.	VACCINAL HISTORY.				VACCI- NATED AFTER EXPOSURE		Character of attack.	Duration of ill- ness—days.....	Result.
					When vac- ci- nated..	Where vaccinated.	Virus...	Result.	Virus..	Result.			
198	M	37	Norway	Book-keeper	Ch	Norway	H	T	B	F	Discrete	30	Recovery
199	M	36	United States	Cook	Never.	Norway	H	T	B	F	Discrete	31	Recovery
200	M	21	Denmark	Blacksmith	Ch	Denmark	H	T	B	F	Discrete	28	Recovery
201	M	47	Unknown.	Laborer	Ch	Sweden	H	T	B	F	Discrete	26	Recovery
202	M	45	Sweden	Laborer	Ch	Sweden	H	T	B	F	Discrete	25	Recovery
203	M	15	Bohemia		Ch	Bohemia	H	T	B	F	Discrete	25	Recovery
204	M	28	England	Peddler	Never.	before exposure.	H	T	B	S	Discrete	63	Recovery
205	M	52	Ireland	Laborer	Never	before exposure.	H	M	B	F	Discrete	60	Recovery
206	M	59	England	Book-keeper	Ch	England	H	M	B	F	Discrete	63	Recovery
207	M	4	United States		Ch	(See note.)	H	M	B	F	Discrete	54	Recovery
208	F	37	Germany	Housewife	Ch	Germany	H	M	B	F	Discrete	20	Recovery
209	M	2	United States		Inf	(See note.)	H	T	B	F	Discrete	54	Recovery
210	M	14	United States	Public scholar	Ch	United States	H	M	B	F	Discrete	Recovery	
211	M	25	England	Laborer	Ch	England	H	M	B	F	Discrete	Recovery	
212	M	19	United States	Laborer	Ch	United States	H	T	B	F	Discrete	Recovery	
213	M	25	United States	Clerk	Ch 1880	United States	H	M	B	F	Discrete	Recovery	
214	M	26	United States	Tramp	Never.	United States	H	M	B	F	Discrete	Recovery	
215	F	39	Ireland	Housewife	Inoculated.		H	M	B	F	Discrete	10	Death
216	F	12	United States	Domestic	Never.		H	M	B	F	Discrete	42	Recovery
217	M	27	United States	Feed master in stock-yards	Never.	(See note.)	H	M	B	F	Discrete	10	Death
218	M	10	United States	Public scholar	Never.	(See note.)	H	M	B	F	Discrete	10	Death
219	M	39	United States	Butcher	Never.	(See note.)	H	M	B	F	Discrete	8	Death
220	M	7	United States	Public scholar	Never.	(See note.)	H	M	B	F	Discrete	12	Recovery
221	M	33	Ireland	Railway service	1880	United States	H	M	B	F	Discrete	12	Recovery
222	M	24	Ireland	Laborer	Never.	(See note.)	H	M	B	F	Discrete	10	Death
223	M	29	Germany	Laborer	Ch	Germany	H	T	B	F	Discrete	28	Recovery
224	M	39	United States	Private scholar	Never	before exposure.	H	T	B	F	Discrete	12	Death
225	F	30	United States	Housewife	Never	before exposure.	H	T	B	F	Discrete	28	Recovery
226	F	40	Germany	Carpenter	Inf	Germany	H	T	B	F	Discrete	28	Recovery
227	F	28	Germany	Housewife	Inf	Germany	H	T	B	F	Discrete	23	Recovery
228	M	7	United States	Public scholar	Never	before exposure.	H	T	B	S	Discrete	21	Recovery
229	M	4	United States		Never	before exposure.	H	T	B	S	Discrete	19	Recovery
230	M	1	United States		Never	before exposure.	H	T	B	S	Discrete	37	Recovery
231	M	25	England	Laborer	Ch	England	H	F	B	F	Discrete	12	Death
232	F	50	Sweden	Housewife	Inf	Sweden	H	M	B	F	Discrete	12	Death
233	F	19	United States	Domestic	Never.	United States	H	M	B	F	Discrete	29	Recovery
234	F	24	United States	Laborer	Ch	Sweden	H	M	B	F	Discrete	8	Recovery
235	F	37	Sweden	Housewife	Ch	Sweden	H	M	B	F	Discrete	8	Recovery





Tabular Statement—Continued.

Number	Sex	Age	Nativity.	Occupation.	VACCINAL HISTORY.				VACCI-NATED AFTER EXPOSURE.		Character of attack.	Duration of illness—days	Result.
					When vaccinated..	Where vaccinated.	Virus...	Result.					
275	M	16	United States	Tramp	1871	United States	H	T	B	S	Discrete	18	Recovery
276	M	14	United States	Public scholar	Never	before exposure.			B	S	Discrete	30	Recovery
277	M	10	United States	Public scholar	Never	before exposure.			B	S	Discrete	22	Recovery
278	M	5	United States	United States	Never	United States	B	T			Hemorrhagic.	14	Death
279	F	11	United States	Quarryman	1876	United States					Discrete	24	Recovery
280	M	19	Poland	Quarryman	Ch	Poland					Hemorrhagic	10	Death
281	M	45	Poland	Public scholar	Never	Poland					Discrete	28	Recovery
282	F	8	United States	Laborer	Never						Confluent	37	Recovery
283	F	35	Poland		Never						Confluent	37	Recovery
284	F	6	United States		Never						Confluent	8	Death
285	F	9	United States		Never						Confluent	40	Recovery
286	F	12	United States		Never						Confluent	40	Recovery
287	F	3	Poland		Never	before exposure.					Confluent	22	Recovery
288	F	30	Germany	Housewife	Ch	Germany	H	M	B	S	Discrete	32	Recovery
289	M	8	Poland	Quarryman	Never						Discrete	29	Recovery
290	M	30	Poland	Private scholar	Never						Discrete	30	Recovery
291	M	8	United States	Private scholar	Never	before exposure.					Discrete	23	Recovery
292	M	6	United States		Never	before exposure.					Discrete	17	Recovery
293	F	6m.	United States		Never	before exposure.			B	S	Discrete	23	Recovery
294	F	6m.	United States	Shoemaker	Never	before exposure.			B	F	Discrete	27	Recovery
295	F	43	Germany	Private scholar	Never	before exposure.			B	S	Discrete	16	Death
296	F	9	Germany	Quarryman	Never	before exposure.			B	S	Discrete	9	Recovery
297	F	16	Germany	Housewife	Ch	Germany	H	T	B	F	Discrete	10	Recovery
298	F	40	Germany		Ch	Germany	H	M	B	F	Discrete	18	Recovery
299	F	7m.	Germany		Never	before exposure.			B	F	Discrete	15	Death
300	M	43	Germany	Laborer	Ch	Germany					Discrete	16	Recovery
301	F	301	Sweden	Private scholar	Ch	Germany					Discrete	18	Recovery
302	F	302	Sweden	Public scholar	Ch	Sweden					Discrete	13	Recovery
303	F	4	Sweden		Ch	Sweden					Discrete	15	Recovery
304	F	18	Sweden		Ch	Sweden					Discrete	16	Recovery
305	M	50	Sweden	Laborer	Ch	Germany	H	T			Discrete	16	Recovery
306	F	30	Germany	Farmer	Ch						Confluent	43	Recovery
307	F	3	United States		Never						Discrete	32	Recovery
308	F	30	United States		Never						Confluent	10	Death
309	F	36	Sweden	Butcher	Ch	Sweden	H	T			Confluent	23	Recovery
310	M	15	Germany	Private scholar	Never	before exposure.			B	S	Discrete	14	Recovery
311	M	25	United States	Farmer	1881	United States	B	M			Discrete	17	Recovery



321	F	Sweden	Housewife	Ch.	Sweden	H	T 5	B	S	Discrete	12 Recovery
315	M	Sweden	Quarryman	Ch.	Sweden	H	T 4	B	S	Discrete	14 Recovery
314	M	Ireland	River service	Never						Confluent	12 Death
313	F	United States	Public scholar	Infcy	1877	B	T			Discrete	18 Recovery
316	M	Germany	Laborer	Infcy	Germany	H	T			Hemorrhagic	6 Death
317	M	Germany	Farmer	Infcy	Germany	H	T 3			Discrete	26 Recovery
318	M	United States		Infcy	United States	H	M			Discrete	20 Recovery
319	F	United States		Infcy	United States	H	M			Discrete	18 Recovery
320	F	United States	Farmer	Infcy	1862	H	T 2			Confluent	47 Recovery
321	M	United States	Laborer	Never	1873	H	F			Discrete	40 Recovery
322	F	United States	Housewife	Never						Confluent	27 Death
323	F	United States	Sexton	Never	1863	H	T 2			Discrete	16 Recovery
324	F	United States	Housewife	Never						Confluent	9 Death
325	M	United States		Never	1872	H	T			Discrete	16 Recovery
326	M	United States		Never	1874	B	T			Discrete	20 Recovery
327	M	United States		Never	1877	B	T			Discrete	19 Recovery
328	F	United States		Never						Confluent	30 Recovery
329	F	United States	Farmer	Never	1840	H	M			Discrete	22 Recovery
330	F	United States	Farmer	Never	(See note)					Confluent	14 Death
331	F	United States	Prostitute	Never	United States	H	T			Confluent	16 Death
332	F	United States	Laborer	Never	1867	H	T			Discrete	24 Recovery
333	F	United States		Never	1877	H	M			Discrete	22 Recovery
334	F	Germany	Farmer	Never	1820	H	M			Discrete	25 Recovery
335	F	United States		Never	before exposure			B	F	Confluent	35 Recovery
336	F	United States		Never	before exposure			B	F	Hemorrhagic	35 Recovery
337	F	United States		Never	before exposure			B	S	Discrete	20 Recovery
338	F	Germany		Never	before exposure			B	F	Confluent	12 Death
339	F	Germany	Tailress	Never	1836	H	M 2			Confluent	42 Recovery
340	M	Germany	Landlord	Never	1833	H	T 3			Discrete	16 Recovery
341	M	United States	Clerk	Never	1830	H	M			Confluent	9 Death
342	F	United States		Never	United States	H	F			Discrete	28 Recovery
343	F	United States		Never	United States	H	F			Discrete	9 Death
344	F	United States	Public scholar	Never						Confluent	10 Death
345	F	United States	Farmer	Never						Confluent	33 Recovery
346	M	United States	Public scholar	Never						Confluent	33 Recovery

NOTES.—No. 281. Nothing but fact of vaccination stated.—No. 287. "I vaccinated this child 3 or 4 times with bovine virus and obtained a typical result, which modified the disease."—No. 305. This man had a large family, all of whom were successfully vaccinated with bovine virus in the early part of January 1882. He thought revaccination unnecessary for himself; helped nurse No. 285; contracted the disease; was cared for at home; surrounded by his family, who all escaped.—No. 306 contracted disease from No. 285, and infected his two children, Nos. 307 and 308. Refused, during the winter, to allow his children to be vaccinated. His wife, vaccinated successfully in 1877 with bovine virus, nursed all the family and escaped.—No. 317 is reported to have been "vaccinated in Germany when an infant."—seven electrifics on each arm; two or three typical, the rest modified.—Nos. 318 and 319 contracted the disease from No. 317, their father.—No. 324. "Duration of illness," as stated, covers entire period of isolation, which, reporter remarks, "was probably longer than would have necessary had a constant and personal oversight of case by physician been possible."—No. 321 was sick one small electrific on forearm, result of vaccination 7 or 8 years previous. Was also vaccinated in 1881, in New York, with an ivory point; electrifics.—No. 329. "Vaccination attempted and scabbed but left no scar."—No. 333 vaccinated while in army, and several times previous; has two typical electrifics.—No. 339. "Vaccination attempted two years ago. Bovine virus. Did not work well. Centrix had."—No. 344. Notwithstanding that this was a very severe case, probably three-fourths of the pustules aborted.—No. 342. No scar visible from vaccination in childhood. Revaccinated in January 1882 is reported in febrile stage of small-pox February 17, 1882, with bovine virus; result, a big but not typical scar.—No. 343 "nursed her daughter (No. 342) and was confined in the house with her. An exposure of the lymphatic vessels, as by vaccination, I did not deem proper, in an atmosphere filled with the contagion."

Tabular Statement—Continued.

No.	Sex	Age	Nativity.	Occupation.	VACCINAL HISTORY.				VACCI- NATED AFTER EXPOSURE.		Character of attack.	Duration of ill- ness—days.....	Result.
					When vacci- nated..	Where vaccinated.	Virus...	Result.	Virus...	Result.			
347	M	35	Switzerland	Farmer	.....	(See note)	.....	.....	.....	.....	Confluent	9	Death
348	F	40	Germany	Housewife	.....	(See note)	.....	.....	.....	.....	Hemorrhagic	19	Death
349	M	43	Germany	Farmer	.....	Germany	H	M	.....	.....	Confluent	23	Recovery
350	M	.....	United States	Barber	.....	1867	H	F	.....	.....	Confluent	33	Recovery
351	M	25	United States	.....	Never	United States	.....	.....	B	F	Confluent	33	Recovery
352	M	20	United States	Laborer	.....	before exposure	H	M	B	S	Discrete	23	Recovery
353	M	50	United States	Stock-man	.....	1872	H	T	B	S	Discrete	10	Recovery
354	F	44	United States	Housewife	.....	1836	H	T	B	F	Discrete	12	Recovery
355	F	34	United States	Merchant	.....	1841	H	T	B	F	Discrete	14	Death
356	F	22	United States	Teacher	.....	1854	H	T	B	F	Discrete	9	Recovery
357	M	18	United States	.....	.....	United States	H	T	.....	.....	Confluent	15	Death
358	M	30	United States	Laborer	Never	.....	.....	.....	B	F	Confluent	40	Recovery
359	M	35	United States	Laborer	Ch	United States	H	T	.....	.....	Confluent	18	Recovery
360	M	21	United States	Farmer	Ch	United States	H	.....	.....	.....	Confluent	6	Death
361	M	35	Germany	Farmer	Never	.....	.....	.....	.....	.....	Discrete	12	Recovery
362	M	34	United States	Physician	.....	United States	H	T	.....	.....	Discrete	18	Recovery
363	M	15	United States	.....	1808	before exposure	.....	.....	B	S	Discrete	21	Recovery
364	M	8	United States	.....	Never	before exposure	.....	.....	B	S	Discrete	16	Recovery
365	F	6	United States	.....	Never	before exposure	.....	.....	B	S	Discrete	14	Recovery
366	M	33	United States	Farmer	Never	.....	.....	.....	.....	.....	Confluent	42	Recovery
367	M	24	United States	Farmer	Never	.....	.....	.....	.....	.....	Hemorrhagic	8	Death
368	F	13	United States	Public scholar	Never	.....	.....	.....	.....	.....	Discrete	33	Recovery
369	F	40	United States	Laundress	Never	before exposure	.....	.....	.....	.....	Discrete	12	Recovery
370	F	11	United States	.....	Never	before exposure	.....	.....	.....	.....	Confluent	9	Death
371	F	3	United States	Public scholar	Never	before exposure	.....	.....	.....	.....	Discrete	16	Recovery
372	F	4	United States	.....	Never	before exposure	.....	.....	.....	.....	Confluent	9	Death
373	F	15	United States	Domestic	1883	.....	B	T	B	S	Discrete	12	Recovery
374	F	18	United States	Farmer	1874	United States	H	F	.....	.....	Confluent	26	Recovery
375	F	55	England	Housewife	.....	United States	H	T	B	F	Discrete	6	Recovery
376	M	40	United States	Farmer	1874	England	H	T	B	F	Discrete	6	Recovery
377	M	29	United States	Farmer	1874	United States	H	T	B	F	Discrete	6	Recovery
378	F	27	United States	Farmer	1872	United States	H	T	.....	.....	Discrete	9	Death
379	F	78	United States	Housewife	Never	.....	.....	.....	.....	.....	Confluent	9	Death
380	F	66	United States	Housewife	Never	before exposure	.....	.....	B	S	Discrete	19	Death
381	F	6	United States	Public scholar	Never	.....	.....	.....	.....	.....	Confluent	22	Recovery
382	M	38	United States	Farmer	Ch	United States	H	T	.....	.....	Discrete	16	Recovery
383	F	36	United States	Housewife	Ch	United States	H	T	.....	.....	Discrete	18	Recovery
384	F	70	United States	Housewife	Ch	United States	H	T	.....	.....	Discrete	22	Recovery









No.	Profession	Country	Age	Time of exposure	Result	Remarks
452	F	3 United States	3	Never	Discrete	10 Death.
453	F	4 United States	4	Never	Discrete	14 Recovery
454	M	6 United States	6	Never	Discrete	16 Recovery
455	F	14 United States	14	Never	Discrete	12 Recovery
456	M	22 United States	22	Never	Discrete	10 Death.
457	M	20 United States	20	1873	Discrete	15 Recovery
458	M	7 United States	7	1881	Discrete	8 Recovery
459	F	5 United States	5	1881	Discrete	8 Recovery
460	F	40 United States	40	Ch.	Discrete	20 Recovery
461	F	17 United States	17	Never	Discrete	42 Recovery
462	M	14 United States	14	1878	Discrete	16 Recovery
463	M	12 United States	12	Never	Discrete	38 Recovery
464	M	5 United States	5	1877	Discrete	16 Recovery
465	M	40 United States	40	1869	Discrete	7 Death.
466	M	45 United States	45	Ch.	Discrete	9 Recovery
467	F	17 United States	17	Never	Discrete	28 Recovery
468	F	39 United States	39	Never	Discrete	30 Recovery
469	F	36 United States	36	1861	Discrete	18 Recovery
470	F	3 United States	3	United States	Discrete	14 Recovery
471	M	11 United States	11	(See note.)	Discrete	16 Recovery
472	M	19 United States	19	United States	Discrete	29 Recovery
473	M	43 United States	43	United States	Discrete	18 Recovery
474	F	13 United States	13	1852	Discrete	17 Recovery
475	M	22 United States	22	1881	Discrete	22 Recovery
476	M	1 United States	1	United States	Discrete	10 Death.
477	M	40 United States	40	(See note.)	Discrete	33 Recovery
478	F	19 United States	19	Never	Discrete	22 Death.
479	M	19 United States	19	Never	Discrete	12 Recovery
480	F	45 Ireland	45	Ch.	Discrete	26 Recovery
481	M	19 United States	19	Never	Discrete	18 Recovery
482	F	45 Germany	45	Inf.	Discrete	31 Recovery
483	F	15 United States	15	Never	Discrete	8 Recovery
484	F	12 United States	12	Never	Discrete	10 Recovery
485	F	11 Ireland	11	Ch.	Discrete	10 Recovery

N. 423.—Nos. 422 and 423 were vaccinated the previous spring (1884) with bovine virus, and each showed one "bad" cicatrix. They were both vaccinated one month after exposure without success.—Nos. 433 and 434 were vaccinated January 12, 1887, with bovine virus, resulting in typical cicatrices; one month later both had very mild cases of varioloid, greatly modified by recent vaccination.—Nos. 438 and 439 were vaccinated December 26, 1881; on the 24 and 25 of February, 1882, respectively, were found in febrile stage of variola. Vaccinal crusts had just fallen off, leaving typical cicatrices. Disease very mild; eruption limited; "shotty" feel in papular stage, very distinct; no suppuration.—No. 471 was vaccinated, humanized virus, unsuccessfully, about four months, and again, bovine virus, successfully, about two weeks before attack; "last vaccination was working well when child took sick."—No. 472 had the same vaccinal experience as his brother, No. 471, except that the second vaccination was also unsuccessful. About two days before beginning of febrile stage, having then been exposed over three weeks, he was again vaccinated with lymph taken from the arm of No. 471, and this proved successful, the two diseases running along simultaneously. Attacks very mild in both cases.—No. 476, "vaccinated twice with bovine virus; first did not work; second, just previous to infection, worked slightly."—No. 480, vaccinated in both arms, humanized virus, during childhood in Ireland; presents two large cicatrices. Patient had a slight cut on hand, into which virus was accidentally introduced while nursing her son.—No. 479, "mild attack; symptoms very light; eruption slight."—No. 481 was vaccinated December 26, 1881, and January 6, 1882, bovine virus, both unsuccessful. Was attacked February 1, 1882.—No. 484 was first vaccinated several days after exposure to No. 483, her sister. Repeated three days later, and again "a few days later," first attempt unsuccessful, but "either second or third worked and was in full operation while the profuse eruption was in progress." Result was a very light attack, compared with her sister, and made a rapid recovery.

Tabular Statement—Continued.

Number	Sex	Age	Nativity	Occupation	VACCINAL HISTORY.				VACCI- NATED AFTER EXPOSURE.	Character of attack.	Duration of ill- ness—days.....	Result.
					When vacci- nated.	Where vaccinated.	Virus...	Result.				
486	F	15	United States	Private scholar	Never					Confluent	35	Recovery
487	F	14	United States	Private scholar	Never					Confluent	42	Recovery
488	F	8	United States	Private scholar	Never					Hemorrhagic	9	Death
489	F	14	United States	Private scholar	Never					Confluent	28	Recovery
490	F	38	Ireland	Housewife	Ch	Ireland	H	F		Confluent	8	Death
491	F	2	United States		Never					Hemorrhagic		Death
492	M	3	United States		Never					Discrete	25	Recovery
493	M	40	Germany	Laborer	Ch					Confluent	10	Death
494	M	40	Germany	Laborer	Ch	Not known	H	T		Confluent	54	Recovery
495	M	45	Germany	Cooper	Ch	Germany	H	T		Discrete	28	Recovery
496	M	21	United States		Never					Hemorrhagic	38	Recovery
497	M	14	United States	Public scholar	Never					Discrete	30	Recovery
498	M	40	Germany	Laborer	Ch	Germany	H	T		Discrete	10	Recovery
499	F	12	United States	Public scholar	Never					Discrete	14	Recovery
500	F	16	United States	Domestic	Never					Discrete	30	Recovery
501	M	40	Scotland		Ch					Confluent	7	Death
502	M	35	Ireland	Laborer	Ch	Ireland	H	F		Hemorrhagic	12	Death
503	M	42	Ireland	Laborer	Never					Discrete	18	Recovery
504	F	50	Ireland	Housewife	Ch	United States	H	T		Discrete	10	Recovery
505	F	28	Ireland	Laborer	Ch	Ireland	H	T		Discrete	20	Recovery
506	F	506	United States	Tramp	Ch	United States	H	T		Discrete	12	Recovery
507	F	30	United States	Housewife	Ch	United States	H	T		Discrete	10	Recovery
508	M	28	United States	Night clerk	Ch	United States	H	T		Discrete	12	Recovery
509	M	25	Sweden	Laborer	Ch	Sweden	H	T		Discrete	32	Recovery
510	F	15	United States	Laborer	Ch					Confluent	8	Recovery
511	F	12	United States	Private scholar	Never					Discrete	22	Recovery
512	F	21	United States	Housewife	Never					Discrete	20	Recovery
513	F	17	United States	Housewife	Never					Discrete	15	Death
514	M	5 m	United States	Domestic	Never					Confluent	16	Recovery
515	M	38	United States	Farmer	1876	United States	H	T		Discrete	33	Recovery
516	M	6	United States	Public scholar	Never					Confluent	16	Recovery
517	F	35	Sweden	Housewife	1853	Sweden	H	T		Discrete	33	Recovery
518	M	4	United States		Never					Confluent	20	Recovery
519	M	6	United States		Never					Discrete	34	Recovery
520	F	2	United States		Never					Confluent	13	Death
521	F	15	United States	Public scholar	Never					Confluent		





Tabular Statement—Continued.

Number	Sex	Age	Nativity.	Occupation.	VACCINAL HISTORY.				VACCI- NATED AFTER EXPOSURE.		Character of attack.	Duration of ill- ness—days .....	Result.
					When vacci- nated..	Where vaccinated.	Virus...	Result.					
552	M	3	United States		Never.						Confluent	43	Recovery
553	F	2 m	United States	Railroad service.	Never.						Confluent	14	Death
554	F	22	United States	Housewife	Never.						Confluent	11	Death
555	F	38	Sweden		Ch	Sweden	H	T			Discrete	16	Recovery
556	M	3	United States		Ch	United States	H	T			Discrete	22	Recovery
557	M	37	Wales	Miner	Ch	United States	H	T			Discrete	12	Recovery
558	F	34	Scotland	Housewife	Never.						Confluent	13	Death
559	F	17	Sweden		Never.	before exposure.				B	Confluent	25	Recovery
560	M	5	United States		Never.	before exposure.				B	Discrete	24	Recovery
561	M	20	United States	Railway service	Never.						Confluent	11	Death
562	F	12	United States	Public scholar	1881	United States	B	T		B	Discrete	24	Recovery
563	M	12	United States	Miner	1881	United States	B	T		B	Discrete	18	Recovery
564	F	17	England		Ch	England	H	T		B	Discrete	22	Recovery
565	F	19	England		Ch	United States	B	T		B	Discrete	16	Recovery
566	M	15	England	Miner	1881	United States	B	T		B	Discrete	24	Recovery
567	M	27	Scotland	Miner	Ch	Scotland	H	T			Discrete	18	Recovery
568	M	33	Ireland	Minister		(See note)					Confluent	35	Recovery
569	M	33	United States	Glass-blower	1851	United States	H	F		B	Discrete	30	Recovery
570	M	45	Germany	Farmer	1863	United States	H	T		B	Discrete	18	Recovery
571	M	7	United States	Public scholar	1880	United States	H	T			Confluent	42	Recovery
572	M	19	United States	Farmer	Never.						Confluent	12	Death
573	F	48	United States	Carpenter	Never.	United States	H	M		B	Discrete	10	Recovery
574	F	45	United States	Housewife	Ch	United States	B	T		B	Discrete	12	Recovery
575	F	30	United States	Teacher	1879	United States	B	T		B	Discrete	16	Recovery
576	F	12	United States		Never	before exposure.				B	Discrete	16	Recovery
577	F	2	United States		Never	before exposure.				B	Discrete	17	Recovery
578	F	30	United States	Housewife	1861	United States	H	M			Discrete	26	Recovery
579	F	6	United States	Public scholar	Never.					B	Discrete	24	Recovery
580	F	17	United States	Domestic	Never	before exposure.				B	Discrete	24	Recovery
581	F	21	United States	Domestic	Never	before exposure.				B	Discrete	16	Death
582	F	16	United States	Carpenter	Ch	United States	H			B	Confluent	16	Death
583	F	50	United States		Never	before exposure.				B	Discrete	14	Recovery
584	F	9	United States	Public scholar	Never.	before exposure.				B	Confluent	20	Recovery
585	F	4	United States		Never	before exposure.				B	Discrete	24	Recovery
586	F	8	United States	Public scholar	Never	before exposure.				B	Discrete	24	Recovery
587	M	11	United States	Public scholar	Never	before exposure.				B	Discrete	30	Recovery
588	M	53	Germany	Laborer	1830	Germany	H			B	Hemorrhagic	9	Death
589	F	7	United States	Public scholar	Never	before exposure.				B	Hemorrhagic	5	Death
590	F	14	United States	Public scholar	Never	before exposure.				B	Discrete	23	Recovery



590	M	6 United States	Public scholar	Never	before exposure	Discrete	F	B	16 Recovery
591	M	24 Denmark	Railway service	Never	(See note)	Hemorrhagic			6 Death
592	F	70 Denmark	Housewife	Ch	Denmark	Confluent			11 Death
593	F	36 Denmark	Housewife	Ch	Denmark	Discrete			27 Recovery
594	F	23 Denmark	Domestic	Ch	Denmark	Confluent	F	B	7 Death
595	F	33 Denmark	Housewife	Ch	Norway	Confluent			10 Death
596	F	29 Norway	Domestic	Ch	Norway	Hemorrhagic			5 Death
597	F	7 Norway	Domestic	Never	before exposure	Discrete	S	B	14 Recovery
598	M	40 United States	Carpenter	Never	(See note)	Confluent			7 Death
599	M	50 United States	Farmer	Never	before exposure	Confluent	F	B	10 Death
600	F	22 United States	Teacher	Never	before exposure	Confluent	S	B	30 Recovery
601	M	25 Germany	Farmer	1855	Germany	Confluent			28 Recovery
602	F	11 United States	Farmer	Never	before exposure	Confluent	F	H	16 Recovery
603	F	3 United States	Farmer	Never	before exposure	Confluent	F	H	8 Death
604	F	3 United States	Farmer	Never	before exposure	Confluent	F	H	12 Death
605	F	31 United States	Housewife	1850	United States	Hemorrhagic			35 Recovery
606	F	36 United States	Laborer	1848	United States	Confluent	F	H	4 Death
607	F	9 United States	Teacher	Never	(See note)	Hemorrhagic			18 Death
608	F	19 Canada	Housewife	1817	Germany	Confluent			18 Recovery
609	F	36 Germany	Housewife	1817	Germany	Confluent			50 Recovery
610	F	10 Germany	Farmer	1881	United States	Discrete			20 Recovery
611	F	24 United States	Farmer	Never	before exposure	Discrete	F	B	35 Recovery
612	F	20 United States	Domestic	Never	before exposure	Hemorrhagic			14 Death
613	M	28 United States	Farmer	Never	before exposure	Confluent			37 Recovery
614	M	17 United States	Farmer	1855	United States	Discrete	S	H	7 Death
615	M	17 United States	Farmer	1855	United States	Hemorrhagic			9 Recovery
616	F	12 United States	Housewife	Never	before exposure	Discrete	S	B	16 Recovery
617	F	20 United States	Housewife	1855	Germany	Confluent	F	B	11 Death
618	F	17 Germany	Domestic	Never	before exposure	Confluent	F	B	25 Recovery
619	F	8 United States	Domestic	Never	before exposure	Confluent			
620	F	5 United States	Domestic	Never	before exposure	Confluent			

NOTES.—No. 567, "vaccinated in the old country; modified the disease very materially."—No. 572, "claimed to have been vaccinated successfully years before, but no vaccine cicatrix could be discovered."—No. 577, result of vaccination in 1861, "a mere trace, but probably greatly modified the attack."—No. 579 vaccinated after exposure, "five days before attack; bovine virus. Slight and imperfect progress along with variola."—No. 580 vaccinated after exposure; "result not noted; think it was a failure."—No. 581 vaccinated "when a child; cicatrix not examined; no modifying effect upon present attack."—No. 582 vaccinated after exposure, bovine virus; "typical result, vaccine and variola progressing together, and variola probably greatly modified thereby."—No. 587, "cicatrix not examined; had no effect upon cicatrix and progress of attack."—No. 585 was re-vaccinated March 22, 1852, before leaving steamer at Philadelphia, without effect.—No. 596, re-vaccinated at same time and place, with same result.—No. 598, "vaccinated when a child; huminized virus; one small cicatrix; vaccinated sixteen years ago without success."—No. 599, "had been vaccinated several times without effect; virus believed to be good in every instance."—No. 600 was vaccinated and "it seemed to take, but it is supposed the contagion got the start of the vaccine disease." This case was a most violent one, and life hung in the balance for ten days.—No. 601 "was vaccinated, unsuccessfully, at Baltimore quarantine in the latter part of March, 1852; contracted disease from wife, also re-vaccinated unsuccessfully, at same time and place, and had an attack of varioloid soon after landing."—No. 602 was vaccinated by her father, unsuccessfully, huminized virus, 5 or 6 days after exposure.—No. 603, same history as No. 602.—No. 604, ditto; died during febrile stage. None of these three had previously been vaccinated.—No. 606 was the father of the three preceding, and of No. 609, and husband of No. 605. Vaccinated himself and family, unsuccessfully, after exposure, with huminized virus.—No. 607 was suffering with whooping cough when attacked, and died, during febrile stage, of strangulation. No. 609, "each arm presented a chain of typical cicatrices, six upon one and seven upon the other. Had never been re-vaccinated, since infancy, feeling secure on account of the number of scars she carried."—No. 610 vaccinated "when very young."—No. 612, with three others, was vaccinated the same day as exposed; the others "took well" and escaped, but No. 612's was a failure.—No. 617, not vaccinated until the seventh day after exposure; bovine virus successfully; "materially mitigating the severity of the disease."

*Tabular Statement—Continued.*

Number	Sex	Age	Nativity.	Occupation.	VACCINAL HISTORY.				VACCI- NATED AFTER EXPOSURE.	Character of attack.		Duration of ill- ness—days.....	Result.
					When vac- cinated.	Where vaccinated.	Virus..	Result					
621	M	2	United States	Farmer	Never	before exposure.	H	T	B	F	Hemorrhagic	12 Death.....	
622	M	51	United States	Housewife	1890	United States.	H	T	B	F	Discrete	15 Recovery	
623	M	1	United States			(See note)			B	S S S	Discrete	22 Recovery	
624	F	37	United States			(See note)			B	S	Discrete	20 Recovery	
625	F	7	United States			(See note)			B	S	Discrete	17 Recovery	
626	F	47	United States	Farmer	1890	United States.	H	T	B	F	Discrete	32 Recovery	
627	F	42	United States	Housewife	1887	United States.	H	T	B	F	Discrete	10 Recovery	
628	F	20	United States	Housewife	Never	before exposure.	H	T	B	F	Hemorrhagic	14 Death.....	
629	F	45	United States	Farmer	1884	United States.	H	T	B	F	Discrete	7 Recovery	
630	F	16	United States		Never						Discrete	30 Recovery	
631	F	18	United States		Never						Discrete	30 Recovery	
632	M	28	United States	Railway service.	1865	United States.	H	T	B	F	Discrete	15 Recovery	
633	F	11	United States	Public scholar	Never	(See note)			B	S	Discrete	21 Recovery	
634	F	17	United States	Public scholar	Never	before exposure.					Discrete	28 Recovery	
635	F	12	United States	Public scholar	Never						Discrete	27 Recovery	
636	F	17	United States	Public scholar	Never						Discrete	14 Recovery	
637	M	15	United States	Public scholar	Never						Discrete	10 Recovery	
638	F	30	United States	Housewife	Never	(See note)					Discrete	14 Recovery	
639	F	50	England	Housewife	Never	(See note)					Discrete	10 Death.....	
640	F	21	United States	Laborer	Never	United States.	H	T			Discrete	18 Recovery	
641	M	5	United States		1878	United States.	H	T			Discrete	16 Death.....	
642	M	19	United States	Farmer.	Never	United States.	H	T			Discrete	20 Recovery	
643	M	19	United States	Laborer	Ch.	United States.	H	T			Discrete	5 Death.....	
644	M	42	United States	Farmer	Never	United States.	H	T	B	F	Discrete	12 Recovery	
645	F	40	United States	Housewife	1840	United States.	H	T	B	S	Discrete	45 Recovery	
646	M	21	United States	Farmer.	Never	before exposure.			B	S	Discrete	23 Recovery	
647	M	23	United States	Farmer.	Never	before exposure.			B	S	Discrete	35 Recovery	
648	F	63	United States	Farmer.	Never	(See note)			B	F	Discrete	38 Recovery	
649	F	59	United States	Housewife	1852	United States.	H	M	B	F	Discrete	31 Recovery	
650	F	17	United States	Farmer.	Never	United States.	B	M	B	S	Discrete	34 Recovery	
651	F	18	United States	Teacher	1882	before exposure.			B	S	Discrete	36 Recovery	
652	F	12	United States		Never	before exposure.			B	S	Discrete	10 Death.....	
653	F	16	United States		Never	before exposure.			B	S	Discrete	18 Death.....	
654	F	31	United States	Farmer.	Never	before exposure.			B	S	Discrete	7 Death.....	
655	F	24	United States	Housewife	Never				B	S	Discrete	8 Death.....	
656	F	2m	United States		Never						Discrete		
657	M	3	United States		Never						Discrete		

	6 <sup>1</sup> United States	Never before exposure.	H	T	B	S	Recovery
658 M	26 United States	1850 United States	H	T		Discrete	25 Recovery
659 M	26 United States	1850 United States	H	T		Discrete	14 Recovery
660 M	32 England	Farmer (See note)	H	T		Discrete	16 Recovery
661 M	32 Germany	1852 Germany	H	T		Discrete	7 Recovery
662 F	46 Germany	1857 Germany	H	T		Discrete	14 Recovery
663 M	22 United States	Clerk			F	Discrete	15 Death
664 M	5 United States	Never				Discrete	10 Death
665 M	50 England	Farmer	H	T		Discrete	14 Recovery
666 M	8 United States	Ch...	H	T		Discrete	17 Recovery
667 M	14 United States	Ch...	H	T		Discrete	19 Recovery
668 M	25 United States	Public scholar	H	T		Discrete	20 Recovery
669 M	25 United States	Blacksmith	H	T		Discrete	20 Recovery
670 M	26 United States	Farmer	H	T		Discrete	20 Recovery
671 M	27 United States	Public scholar	H	T		Discrete	20 Recovery
672 M	40 United States	Railway service	H	T		Discrete	25 Recovery
673 M	30 Ireland	Railway service	H	T		Discrete	15 Recovery

NOTES.—No. 623 was successfully vaccinated, bovine virus, about three weeks before being attacked.—No. 624, substantially same history as No. 623; first and only vaccination reported about three weeks before attack.—No. 625, ditto.—No. 626, vaccinated in infancy, unsuccessful; again after exposure, unsuccessful; "the only one in the family whose vaccination was not good."—No. 638 "was vaccinated twice, both unsuccessful; was in Missouri! last time it was tried."—No. 639 was inoculated in England some twenty-five or thirty years ago.—No. 644, "supposed to have been vaccinated when a boy, but it was a 'spurious' vaccination—likely made a small scab; made no mark, and did not affect the system in any way to ward off the disease, refused to be vaccinated after exposure; said he was 'safe enough, and not afraid.'"—No. 646, "no previous vaccination; vaccinated after exposure, bovine virus, with good effect; modified the disease very sensibly."—No. 647, same remarks as No. 646.—No. 648, "This case was 'inoculated' forty years previous, and reported to me as being very sick for a number of years; the pustules were 'thick and deep,' as he described them, all over his body from the effect of the inoculation, and left not only 'pits,' but large white scars. He thought he was perfectly protected, and was confident that it was scarcely possible to contract the disease—but he did, notwithstanding. He was badly broken out in the face and arms, and also lower extremities; the febrile symptoms very severe; had no dangerous complications; was advanced in years, and a long time recovering; the sequelae were tendency to diarrhoea; large necrating patches over upper and lower extremities; loss of appetite; no sleep, and great emaciation; was confined to bed a number of weeks. The prognosis in his case would have been unfavorable if his system had not been partially protected by his 'inoculation'; his case no doubt would have terminated as *all* the other cases did that were not protected wholly or in part by vaccination or inoculation—in death."—No. 657, vaccinated at same time with Nos. 654, 655 and 656, bovine virus; the only one of the four which proved successful; reporter says, "modified attack so as to save life."—No. 660 was "inoculated in England thirty years ago; many deep cicatrices over body; greatly modified."—Nos. 661 and 662 "may be regarded as typical cases that deserve more than a passing notice. They were vaccinated and revaccinated in Prussia several times before they were six months old in accordance with German law, to be assured that the system was thoroughly protected—that the vaccination was genuine, not spurious and deceptive. It has always been my opinion that one thorough vaccination was sufficient to protect the system during life; but it is safe advice that the person be vaccinated at different times and with different kinds of virus, (both B. and H.) to be certain that the specific effect be produced. These Germans (each) showed three cicatrices, 'clover leaf' and well marked, applied 55 years and 6 months and 45 years and 6 months respectively. No revaccination had been applied during all these years of an average of half a century; although exposed many times in Germany and America, and did not contract the disease till he came in contact with the tramp, February 20, 1882. The case of No. 661 was of a mild type; confined to bed about 7 days; febrile symptoms not violent. No. 662 was of a mild type that she was in bed but one day, and had about a dozen pustules over her body. Now, as one attack of measles taken as a type of the eruptive diseases) exempts the system from a subsequent attack, so does variola or varioloid, as a rule, exempt the system; that is, the specific poison (so to term it) of measles, whooping cough and scarlet fever must be placed in the same category with variola, varioloid and vaccination. These *expi infanti*, especially variola, must act as a species of ferment, not on the circulating fluids (red or white blood) because too transient, but on the blood membrane (of Meigs), in some mysterious way bringing about a change that renders innocuous to the system the poisonous element not for a few months or years, but for half a century, as we have seen in these two Germans. Although the comparison between these diseases is not quite parallel, yet sufficiently so to show the presence of a septic poison that, as a rule, causes some change somewhere in the system once only, and that change remains permanent during life."—No. 664, "vaccinated about a month before death; bovine virus; unsuccessful."—No. 668 had been successfully revaccinated about two months before he was attacked; "had a very light case."—Nos. 669, 670 and 671, substantially the same history as No. 668.



Tabular Statement—Continued.

Number	Sex	Age	Nativity.	Occupation.	VACCINAL HISTORY.				VACCI- NATED AFTER EXPOSURE.		Character of attack.	Duration of ill- ness—days....	Result.
					When vacci- nated.	Where vaccinated.	Virus...	Result.	Virus...	Result.			
674	M	11	United States	Machinist.	Never.	United States	H	M			Discrete.	35	Recovery
675	M	23	United States	Laborer	Ch	Never	H	M			Discrete.	31	Recovery
676	M	56	United States	Laborer	Never	1832	H	T			Discrete.	28	Recovery
677	M	19	United States	Housewife	Never	1867	H	T	B	F	Discrete.	18	Recovery
678	F	21	United States	Farmer	1871	United States	H	T	B	F	Discrete.	18	Recovery
679	M	32	United States		Never	before exposure			B	S	Confluent.	23	Recovery
680	M	37	United States		Never						Hemorrhagic.	8	Death
681	M	37	United States	Laborer	Never	1830	H	M	B	F	Discrete.	18	Recovery
682	F	56	United States	Housewife	Never	1882	H	M	B	F	Discrete.	18	Recovery
683	M	30	United States	Laborer	Never	before exposure			B	F	Confluent	33	Recovery
684	F	14	United States		Never	before exposure			B	F	Confluent	30	Recovery
685	M	7	United States		Never	before exposure			B	F	Discrete.	16	Recovery
686	M	30	United States	Laborer	1854	United States	H	T	B	F	Discrete.	17	Recovery
687	M	36	Germany	Farmer	Ch	1848	H	T			Discrete.	20	Recovery
688	F	36	Germany	Housewife	1848	Germany	H	T			Discrete.	22	Recovery
689	F	12	United States		Never	1880	H	T	B		Discrete.	24	Recovery
690	M	10	United States		Never	before exposure			B		Confluent	18	Recovery
691	F	8	United States		Never	before exposure			B		Discrete.	18	Recovery
692	F	6	United States		Never	before exposure			B	S	Discrete.	17	Recovery
693	F	3	United States		Never	before exposure			B		Confluent	24	Recovery
694	M	2	United States	Painter	Never				B		Confluent	30	Recovery
695	M	26	United States		Never	before exposure			B	S	Discrete.	15	Recovery
696	F	9	United States		Never	before exposure			B	S	Discrete.	16	Recovery
697	F	26	United States	Housewife	Never	before exposure			B	S	Discrete.	12	Recovery
698	M	11	United States		Never	before exposure			B	S	Discrete.	10	Recovery
699	M	36	United States		Never	before exposure			B	S	Discrete.	42	Recovery
700	M	11	United States	Preacher	1851	United States	H	F			Hemorrhagic.	22	Recovery
701	F	38	United States	Housewife	Never	before exposure			B	S	Discrete.	16	Recovery
702	M	2	United States		Never	before exposure			B	S	Discrete.	16	Recovery
703	F	1	United States		Never	before exposure			B	S	Discrete.	18	Recovery
704	M	17	United States	Laborer	Never	before exposure			B	S	Confluent	28	Recovery
705	F	14	United States		Never	before exposure			B	S	Discrete.	16	Recovery
706	F	5	United States		Never				B	S	Confluent	8	Death
707	M	8	United States		Never	before exposure			B	S	Confluent	16	Recovery
708	F	13	United States		Never	before exposure			B	S	Discrete.	5	Recovery
709	M	8	United States		Never	before exposure			B	S	Discrete.	16	Recovery
710	M	52	England	Miner	Ch	England	H	T			Discrete.	16	Recovery
711	M	22	England	Miner		(See note.)					Confluent	14	Death



712	M	12 United States	Never	before exposure.	B	Discrete	22 Recovery
713	F	14 United States	Never	before exposure.	B	Discrete	24 Recovery
714	M	19 United States	Never	before exposure.	B	Discrete	24 Recovery
715	M	12 United States	Never	before exposure.	B	Discrete	18 Recovery
716	M	8 United States	Never	before exposure.	B	Discrete	16 Recovery
717	M	6 United States	Ch	before exposure.	B	Discrete	14 Recovery
718	F	45 England	Ch	England	M	Discrete	18 Recovery
719	F	Domestic	Ch	United States	T	Discrete	18 Recovery
720	M	Farmer	Ch	before exposure.	T	Discrete	18 Recovery
721	F	Housewife	Ch	United States	H	Discrete	15 Recovery
722	F	Housewife	Ch	United States	H	Discrete	10 Death
723	F	6 United States	Never	United States	T	Discrete	17 Recovery
724	F	36 United States	Never	United States	H	Discrete	20 Recovery
725	F	40 United States	Never	United States	H	Discrete	27 Recovery
726	F	9 United States	Never	United States	H	Discrete	29 Recovery
727	M	11 United States	Never	United States	H	Discrete	29 Recovery
728	M	12 United States	Never	United States	H	Discrete	29 Recovery
729	F	18 United States	Never	United States	H	Discrete	29 Recovery
730	F	36 Germany	Never	United States	H	Discrete	29 Recovery
731	F	62 Germany	Never	Germany	H	Discrete	29 Recovery
732	F	732	Never	Germany	H	Discrete	29 Recovery
733	F	10 United States	Never	Germany	H	Discrete	29 Recovery
734	F	4 United States	Never	Germany	H	Discrete	29 Recovery
735	M	34 United States	Never	Germany	H	Discrete	29 Recovery
736	M	7 United States	Never	Germany	H	Discrete	29 Recovery
737	F	52 Germany	Never	Germany	H	Discrete	29 Recovery
738	M	6 United States	Never	Germany	H	Discrete	29 Recovery
739	F	18 United States	Never	Germany	H	Discrete	29 Recovery
740	F	33 Germany	Never	Germany	H	Discrete	29 Recovery
741	M	30 Germany	Never	Germany	H	Discrete	29 Recovery
742	F	31 Germany	Never	Germany	H	Discrete	29 Recovery
743	F	46 Germany	Never	Germany	H	Discrete	29 Recovery
744	M	21 United States	Never	Germany	H	Discrete	29 Recovery
745	M	1 United States	Never	Germany	H	Discrete	29 Recovery
746	M	8 United States	Never	Germany	H	Discrete	29 Recovery
747	M	2 United States	Never	Germany	H	Discrete	29 Recovery
748	M	2 United States	Never	Germany	H	Discrete	29 Recovery

NOTES.—No. 679 had had an attack of small-pox eleven years previous, at which time he was vaccinated with humanized virus—both diseases running their regular course simultaneously. "Has a very large typical cicatrix."—No. 680 was vaccinated after exposure; bovine virus; was slow in taking well. The result of vaccination after exposure is not given in any of the 4 cases. Nos. 690, 691, 692 and 694, in which it was attempted.—Nos. 696-699, inclusive, were vaccinated on the fourth day after exposure, and the reporter is "confident that the disease was greatly modified by the successful vaccination, which took in each case on the sixth day. Vaccinated each one in three places on the arm."—No. 700 "cicatrices bad; had little, if any, modifying influence."—Nos. 702, 703 and 704, vaccinated second day after exposure; "modified the attacks very materially."—No. 706 "vaccinated third day after exposure; but little modification of disease, if any."—Cases 708 and 709, 712 to 717, inclusive, and 720, all reported as "successfully vaccinated at time of exposure," and then succumbing to the contagion at periods varying from 12 to 14 days after, are to be taken as "successful vaccination." It is known that the virus first supplied was inert, and it is probable that in these cases the result produced was not due to the virus. "Very mild."—No. 725 was revaccinated three times after exposure; finally successful—six days before eruption appeared. Modified cicatrices produced, with bovine virus. Attack "very mild, only two pustules appearing."—No. 728 was vaccinated on the third or fourth day after exposure, and again five days after, with bovine virus. "Both were taking tolerably well when the eruption began to appear. The attack was very mild."—Nos. 747 and 748—no statement made about vaccination.

Tabular Statement—Continued.

Number	Sex	Age	Nativity	Occupation	VACCINAL HISTORY.				VACCI- NATED AFTER EXPOSURE		Character of attack.	Duration of ill- ness—days.....	Result.
					When vacci- nated..	Where vaccinated.	Virus...	Result.	Virus...	Result.			
749	M	15	United States.	Laborer.	.....	(See note)	.....	.....	.....	.....	Discrete	.....	Recovery.
750	M	34	United States.	Farmer.	.....	(See note)	.....	.....	.....	.....	Discrete	.....	Recovery.
751	M	30	United States.	Housewife.	.....	(See note)	.....	.....	.....	.....	Discrete	.....	Recovery.
752	F	27	United States.	Domestic.	.....	(See note)	.....	.....	.....	.....	Discrete	.....	Recovery.
753	F	11	United States.	Public scholar.	1881	.....	B	T	B	.....	Discrete	.....	Recovery.
754	F	16	United States.	Public scholar.	1881	.....	B	.....	B	.....	Discrete	.....	Recovery.
755	F	3	United States.	Housewife.	1881	.....	B	M	B	.....	Discrete	.....	Recovery.
756	F	29	United States.	Housewife.	1867	.....	B	.....	B	.....	Discrete	.....	Recovery.
757	F	3	United States.	Housewife.	Never	before exposure.	.....	.....	B	SS	Discrete	.....	Recovery.
758	F	3	United States.	Housewife.	Never	before exposure.	.....	.....	B	SS	Discrete	.....	Recovery.
759	F	34	United States.	Railway service.	Never	before exposure.	.....	.....	B	SS	Discrete	.....	Recovery.
760	F	34	United States.	Housewife.	Never	before exposure.	.....	.....	B	SS	Discrete	.....	Recovery.
761	F	32	England.	Housewife.	Ch.	England.	H	M	B	SS	Hemorrhagic.	.....	Death.
762	F	3	England.	Housewife.	Never	before exposure.	.....	.....	B	SS	Discrete	.....	Death.
763	F	13	United States.	Housewife.	Never	before exposure.	.....	.....	B	SS	Discrete	.....	Recovery.
764	F	7	United States.	Domestic.	Never	before exposure.	.....	.....	B	SS	Discrete	.....	Recovery.
765	F	7	United States.	Domestic.	Never	before exposure.	.....	.....	B	SS	Discrete	.....	Recovery.
766	F	18	United States.	Domestic.	Ch.	(See note)	H	T	B	SS	Discrete	.....	Death.
767	F	26	France.	Nun.	Ch.	France.	H	T	B	SS	Discrete	.....	Recovery.
768	M	24	Ireland.	Laborer.	Never	before exposure.	.....	.....	B	SS	Discrete	.....	Recovery.
769	F	30	United States.	Housewife.	Never	before exposure.	.....	.....	B	SS	Discrete	.....	Recovery.
770	F	2	United States.	Housewife.	Never	before exposure.	.....	.....	B	SS	Discrete	.....	Recovery.
771	M	10	United States.	Housewife.	Never	before exposure.	.....	.....	B	SS	Discrete	.....	Recovery.
772	F	3	United States.	Housewife.	Never	before exposure.	.....	.....	B	SS	Discrete	.....	Recovery.
773	M	13	United States.	Housewife.	Never	before exposure.	.....	.....	B	SS	Discrete	.....	Recovery.
774	F	11	United States.	Housewife.	Never	before exposure.	.....	.....	B	SS	Discrete	.....	Recovery.
775	F	52	United States.	Laundress.	1881	United States.	B	M	B	.....	Discrete	.....	Recovery.
776	F	4	United States.	Laundress.	1881	United States.	B	M	B	.....	Discrete	.....	Recovery.
777	F	8	United States.	Laundress.	Never	before exposure.	.....	.....	B	SS	Discrete	.....	Recovery.
778	F	9	Scotland.	Public scholar.	Ch.	Scotland.	H	T	B	.....	Discrete	.....	Recovery.
779	F	28	Scotland.	Public scholar.	Ch.	Scotland.	H	T	B	.....	Discrete	.....	Recovery.
780	F	6	United States.	Housewife.	Never	before exposure.	.....	.....	B	SS	Discrete	.....	Recovery.
781	M	26	United States.	Public scholar.	1882	United States.	B	T	B	.....	Discrete	.....	Recovery.
782	M	24	United States.	Laborer.	1882	United States.	B	T	B	.....	Discrete	.....	Recovery.
783	M	2	United States.	Laborer.	Never	before exposure.	.....	.....	B	SS	Discrete	.....	Recovery.
784	F	24	United States.	Housewife.	Never	before exposure.	.....	.....	B	SS	Discrete	.....	Recovery.
785	F	18	United States.	Housewife.	1882	United States.	B	T	B	.....	Discrete	.....	Recovery.

Age	Sex	English	English	1844	England	H	T	Discrete.	Recovery
786	M	39	England						
787	F	14	United States	Never	Public scholar	Never	England	Discrete.	16 Recovery
788	F	50	United States	Never	Teacher	Never	England	Discrete.	49 Recovery
789	M	62	Canada	1862	Farmer	1862	United States	Discrete.	Recovery
790	M	28	United States	1850	Medical student	1850	United States	Discrete.	Recovery
791	M	25	United States	1850	Painter	1850	United States	Discrete.	43 Recovery
792	F	23	United States	1872	Seamstress	1872	United States	Discrete.	31 Recovery
793	F	22	United States	1872	Housewife	1872	United States	Discrete.	7 Recovery
794	F	6 m	United States	Never	Housewife	Never	United States	Discrete.	10 Recovery
795	F	10	United States	Never	Public scholar	Never	before exposure	Discrete.	14 Death
796	F	8	United States	Never	Public scholar	Never	before exposure	Discrete.	Recovery
797	F	7	United States	Never	Public scholar	Never	before exposure	Discrete.	Recovery
798	M	9	United States	Never	Public scholar	Never	before exposure	Discrete.	Recovery
799	M	35	United States	Ch.	Laborer	Ch.	United States	Discrete.	9 Recovery
800	F	34	United States	Ch.	Housewife	Ch.	United States	Discrete.	Recovery
801	M	35	United States	Never	Confectioner	Never	before exposure	Discrete.	Recovery
802	F	30	United States	Never	Housewife	Never	before exposure	Discrete.	10 Recovery
803	F	In	United States	1881	Housewife	1881	United States	Discrete.	14 Recovery
804	M	23	United States	Never	Laborer	Never	before exposure	Discrete.	14 Recovery
805	M	35	United States	Never	Clerk	Never	before exposure	Discrete.	20 Recovery
806	F	25	United States	Ch.	Housewife	Ch.	United States	Discrete.	30 Recovery
807	M	25	United States	Never	Musician	Never	United States	Discrete.	16 Recovery
808	M	9	United States	Ch.		Ch.		Discrete.	30 Recovery
809	M	24	United States	Never	Farmer	Never	United States	Discrete.	15 Recovery
810	M	30	United States	Ch.	Farmer	Ch.	United States	Discrete.	12 Death
811	M	43	United States	Ch.	Farmer	Ch.	United States	Discrete.	30 Recovery
812	F	25	United States	Ch.	Housewife	Ch.	United States	Discrete.	14 Recovery
813	F	20	United States	Never	Housewife	Never	before exposure	Discrete.	11 Recovery
814	F	16	United States	Never	Housewife	Never	before exposure	Discrete.	13 Recovery
815	F	12	United States	Ch.		Ch.		Discrete.	12 Death
816	F	62	United States	Never	Housewife	Never	United States	Discrete.	32 Recovery
817	F	24	United States	Ch.	Clerk	Ch.	United States	Discrete.	10 Recovery
818	F	24	United States	Ch.	Housewife	Ch.	United States	Hemorrhagic	8 Death
819	M	20	United States	Ch.	Farmer	Ch.	United States	Discrete.	10 Recovery
820	M	18	United States	Ch.	Farmer	Ch.	United States	Discrete.	21 Recovery

NOTES.—Nos. 749, 750, 751, 752 and 756, only the fact of previous vaccination stated; no date; character of virus and result not given.—Nos. 753 and 755 vaccinated during the previous winter by attending physician, but result not stated.—Nos. 757 and 758 vaccinated by attending physician after exposure; "modified suppurative stage to a great extent."—No. 763, "vaccinated after exposure did not take well, and never has. Was sick one day in bed; only one or two pustules on her."—No. 764, "had just got out of bed from four weeks of typhoid fever." When taken down with small-pox contracted from parents, Nos. 760 and 761.—No. 765 was vaccinated with Nos. 762, 763 and 766, on fourth or fifth day after exposure; "seemed to work well," but the child died on the third day of the febrile stage.—No. 784, "vaccinated during the winter of 1882; arm sore for about nine months, during which time she became pregnant; child vaccinated at two months, and had no symptom of the disease during this exposure."—No. 786 was vaccinated unsuccessfully, while in the army in 1863.—No. 787 was vaccinated unsuccessfully three or four days after exposure, bovine virus.—No. 788 was vaccinated just before exposure; did not take well.—No. 803, child of No. 802, vaccinated after exposure, but no details are given; attack very mild in both cases.—No. 802, "vaccinated just before exposure; did not take well."—No. 806, vaccinated five or six days after exposure; result not stated.—No. 806, vaccinated three or four days after exposure; result not stated.—No. 808, previously vaccinated, no date; "had the disease in a mild form."—No. 813, "was vaccinated three days before disease set in; result so modified disease that she had only a mild attack." Patient subsequently died of "inflammation of bowels," after convalescence from varioloid was fully established.—No. 816, "was vaccinated when a child, 60 years before; result good; disease very mild."—No. 817, "vaccinated in 1861; unsuccessful; also after exposure, bovine virus, unsuccessful."



Tabular Statement—Continued.

Number.....	Sex.....	Age.....	Nativity.	Occupation.	VACCINAL HISTORY.				VACCI-NATED AFTER EXPOSURE		Character of attack.	Duration of illness—days.....	Result.
					When vaccinated..	Where vaccinated.	Virus...	Result.					
821	M	16	United States.....	Farmer.....	Ch.	United States.....	B	T			Discrete.....	16	Recovery.....
822	M	52	United States.....	United States.....	Ch.	United States.....	T	T			Discrete.....	10	Recovery.....
823	F	38	United States.....	Housewife.....	Ch.	United States.....	H	T			Discrete.....	8	Recovery.....
824	F	31	United States.....	Teacher.....	Ch.	United States.....	H	T			Discrete.....	8	Recovery.....
825	F	18	United States.....	United States.....	Never.	United States.....					Confluent.....	42	Recovery.....
826	F	40	United States.....	Farmer.....	Never.	before exposure.			B	S	Discrete.....	35	Recovery.....
827	F	9	United States.....	United States.....	Never.	United States.....					Hemorrhagic.....	10	Recovery.....
828	F	22	United States.....	United States.....	Never.	United States.....					Confluent.....	10	Death.....
829	M	40	United States.....	Farmer.....	Never.	United States.....					Confluent.....	12	Death.....
830	M	32	United States.....	Farmer.....	Ch.	United States.....	H	F			Confluent.....	10	Death.....
831	M	59	United States.....	United States.....	Ch.	United States.....	H	F			Confluent.....	10	Death.....
832	F	24	United States.....	Housewife.....	Ch.	United States.....	H	F			Confluent.....	24	Recovery.....
833	M	19	United States.....	Farmer.....	Never.	United States.....	H	F			Confluent.....	24	Recovery.....
834	F	15	United States.....	United States.....	Ch.	United States.....					Confluent.....	24	Recovery.....
835	F	9 m	United States.....	Never.....	Never.	United States.....					Confluent.....	24	Recovery.....
836	M	5	United States.....	United States.....	Never.	United States.....					Confluent.....	25	Recovery.....
837	M	7	United States.....	Farmer.....	Never.	United States.....	H	T			Discrete.....	18	Recovery.....
838	M	32	United States.....	United States.....	Never.	United States.....	H	M			Discrete.....	30	Recovery.....
839	M	8	United States.....	Housewife.....	Ch.	United States.....	H	M			Discrete.....	24	Recovery.....
840	F	45	United States.....	United States.....	Ch.	United States.....	H	M			Discrete.....	20	Recovery.....
841	M	3	United States.....	Farmer.....	Ch.	United States.....	H	T			Discrete.....	25	Recovery.....
842	M	40	United States.....	United States.....	Ch.	United States.....	H	T			Discrete.....	15	Recovery.....
843	F	2	United States.....	Housewife.....	Ch.	United States.....	H	T			Discrete.....	25	Recovery.....
844	F	50	United States.....	United States.....	Ch.	United States.....					Discrete.....	25	Recovery.....
845	M	9	United States.....	Never.....	Never.	United States.....					Discrete.....	10	Death.....
846	M	4	United States.....	Never.....	Never.	United States.....					Discrete.....	26	Recovery.....
847	M	7	United States.....	Never.....	Never.	United States.....					Discrete.....	30	Recovery.....
848	F	3	United States.....	Never.....	Never.	United States.....					Discrete.....	20	Recovery.....
849	F	20	United States.....	Farmer.....	Never.	(See note) before exposure.			H	S	Discrete.....	6	Death.....
850	F	16	United States.....	United States.....	Never.	(See note) before exposure.					Hemorrhagic.....	2	Death.....
851	F	27	United States.....	United States.....	Never.	(See note) before exposure.					Confluent.....	30	Recovery.....
852	F	18	United States.....	United States.....	Never.	(See note) before exposure.					Confluent.....	3	Death.....
853	F	47	United States.....	Barber.....	Never.	(See note) before exposure.					Confluent.....	4	Death.....
854	M	20	United States.....	Laborer.....	Never.	(See note) before exposure.					Confluent.....	3	Death.....
855	M	18	United States.....	Laborer.....	Never.	(See note) before exposure.					Confluent.....	3	Death.....
856	M	18	United States.....	Painter.....	1872	United States.....	B	F			Hemorrhagic.....	4	Death.....
857	M	16	United States.....	Painter.....	1874	United States.....	B	F			Hemorrhagic.....	4	Death.....



855	M	United States	Machinist	1861	United States	H	M	Discrete	Recovery
850	M	United States	Laborer	Never	Never			Hemorrhagic	14 Death
851	M	United States	Machinist	Never	Never			Confluent	11 Death
863	F	United States	Public school	Never	Never			Confluent	28 Recovery
865	F	United States	Housewife	1870	United States	H	T	Discrete	16 Recovery
864	M	United States	Housewife	Ch.	United States	H	T	Discrete	14 Recovery
865	M	United States	Laborer	1874	United States	B	T <sup>2</sup>	Discrete	17 Recovery
866	F	United States		1877	United States	B	M	Discrete	14 Recovery
867	M	United States		1878	United States	H	T <sup>2</sup>	Discrete	20 Recovery
868	F	United States		Never	before exposure		B	Discrete	17 Recovery
869	F	Sweden	Painter	Never	before exposure		B	Confluent	30 Recovery
870	F	Sweden	Housewife	Ch.	(See note)			Discrete	32 Recovery
871	F	Sweden	Painter	Ch.	Sweden	H	T	Discrete	21 Recovery
872	F	Sweden	Housewife	Ch.	Sweden	H	T	Discrete	27 Recovery
873	F	Sweden	Housewife	Ch.	Sweden	H	T	Discrete	42 Recovery
874	M	Sweden		(See note)				Confluent	Recovery
875	M	Sweden	Laborer	Ch.	Sweden	H	T	Discrete	Recovery
876	M	Germany	Housewife	1845	Germany	H	T	Discrete	Recovery
877	F	Germany	Laborer	1848	Germany	H	T	Discrete	Recovery
878	F	Germany	Domestic	1866	Germany	H	T	Discrete	Recovery
879	M	Germany	Carpenter	Ch.	Germany	H	T	Discrete	Recovery
880	F	Germany	Housewife	Ch.	Germany	H	T	Discrete	Recovery
881	F	Germany	Domestic	Ch.	Germany	H	T	Discrete	33 Recovery
882	F	Germany	Housewife	(See note)	(See note)			Confluent	20 Recovery
883	F	Germany	Laborer	Ch.	Germany	H	T	Discrete	17 Recovery
884	F	United States		Never	before exposure		B	Confluent	8 Death
885	M	Germany		Ch.	Germany	H	T	Discrete	6 Death
886	M	United States	Barrender	Never	Never			Confluent	Recovery

NOTES.—No. 825, "the most severe case of any that recovered." No. 827, vaccinated after exposure; result good; very mild attack; had no doctor.—No. 830 was vaccinated with five others, all exposed at the same time; of the six vaccinations five were successful, two (Nos. 831 and 832) had mild attacks of varioloid, and three escaped entirely. "It is supposed that this girl (No. 830) rubbed the virus of her arm as soon as she left the room, as she strenuously objected to the operation." No. 833 was not vaccinated until the eruption could be seen under the skin: "died from hemorrhage the next morning." No. 834, no vaccinal history. "Said to have had the small-pox years ago." No. 835, no vaccinal history—No. 838, the vaccination "modified the attack largely, and the eruption aborted."—No. 866, "two smooth looking clear-sides; effect on disease very modifying."—No. 867 was exposed some time without contracting the disease, but finally succumbed when his mother (No. 863), with whom he slept, was suffering with varioloid.—No. 868 was vaccinated six days before eruption appeared; "vaccination took and modified the disease very materially." No. 870, when but two months old, unvaccinated, was attacked (in Sweden) with a very severe case of varioloid; her older sister says that for weeks she was curled about, when necessary, in a handkerchief, as she was nothing but a mass of matter and sores; "vaccination was successful when two years old, with humanized virus, and has two very distinct, typical marks." In the year 1850 (twenty years after successful vaccination) she again had a very severe attack of small-pox; says the eruptions were as large as the end of her thumb in many places, and very dark, almost black. In February, 1882, suffered a third attack, a well-marked case of discrete small-pox, attended by severe lung complications." No. 874, almost black, had an attack of varioloid, and ten years later had an attack of confluent small-pox, from which he recovered without medical attention, and with no treatment, save a dose of salts and senna, administered by his mother at the beginning of the attack. "The mother of this boy was 'successfully vaccinated when one year old' in Sweden; again attempted at the age of 18 and at 40 (in 1838), unsuccessfully." Has three large, well-marked typical scars on her arms; has been repeatedly exposed—three times in her own family; slept with her son during his attack; but has never had any symptom of the disease.—Nos. 875 to 880, inclusive, had all been successfully vaccinated in childhood, and the attacks were "mild" or "very mild," but the duration of disease is not stated.—No. 881 "unsuccessfully vaccinated in childhood in Germany; four times unsuccessfully vaccinated with inert bovine virus in Rock Island before exposure."—No. 882 "unsuccessfully vaccinated during childhood in Germany."

Tabular Statement—Continued.

Number	Sex	Age	Nativity.	Occupation.	VACCINAL HISTORY.			VACCI- NATED AFTER EXPOSURE		Character of attack.	Duration of ill- ness—days.....	Result.
					When vac- cinated..	Where vaccinated.	Virus..	Result.	Virus..			
887	M	6	United States		1880	United States	B			Discrete		Recovery
888	F	14	United States	Farmer	1869	United States	T			Discrete		Recovery
889	M	33	United States	Locksmith	1861	Switzerland	H	S	H	Discrete	80	Recovery
890	M	28	Switzerland	Brewer	Ch	Switzerland	T			Discrete	20	Recovery
891	M	32	Germany	Paper	Ch	Germany	T			Discrete	14	Recovery
892	M	30	Germany	Paper	Ch	Germany	T			Discrete	14	Recovery
893	M	26	United States	Miner	Never.	Germany	H			Discrete	15	Death
894	M	58	Germany	Paper	Ch	Germany	T			Discrete	22	Recovery
895	M	63	Germany	Paper	Never.	Germany	H			Discrete	9	Death
896	M	1	United States		Never.	Germany	T			Discrete	20	Recovery
897	F	33	United States	Dressmaker	Never.	Germany	H			Discrete	12	Death
898	F	33	United States		Never.	Germany	H			Discrete	20	Recovery
899	M	10m	United States	Carpenter	Never.	before exposure.				Discrete	13	Death
900	M	33	United States	Seamstress	1863	United States	H	F	B	Discrete	20	Death
901	M	30	United States		Never	before exposure.		F	B	Discrete	13	Death
902	F	10	United States	Housewife	1881	United States	B			Discrete	11	Death
903	F	32	United States		Ch	United States	H			Discrete	22	Recovery
904	F	10	United States		Never	before exposure.		F	B	Discrete	10	Death
905	F	14	United States		Never	before exposure.		F	B	Discrete	12	Death
906	F	33	Canada	Tramp	Never	(See note)				Discrete	18	Death
907	F	36	England	Housewife	Never	before exposure.				Discrete	16	Death
908	F	3	United States	Railway service	Never	before exposure.		S	B	Discrete	12	Death
909	M	25	United States	Public scholar	1868	United States	H	F	B	Discrete	14	Death
910	F	15	United States	Housewife	1858	United States	T			Discrete	21	Death
911	F	54	United States	Housewife	Ch	United States	H	S	B	Discrete	25	Recovery
912	F	65	United States	Physician	Ch	United States	H	S	B	Discrete	14	Recovery
913	M	8	United States		1876	United States	B			Discrete	28	Recovery
914	F	16	United States	Domestic	Ch	United States	B			Discrete	30	Recovery
915	F	31	England	Carpenter	Ch	England		S	B	Discrete	23	Recovery
916	F	38	United States	Housewife	Ch	United States		S	B	Discrete	23	Recovery
917	F	25	United States	Laborer	Ch	United States		F	B	Discrete	22	Recovery
918	F	52	Ireland	Housewife	Ch	(See note)		S	B	Discrete	16	Death
919	M	35	Canada	Tramp	Never	before exposure.				Discrete	30	Recovery
920	M	34	United States	Saloonkeeper	Never	before exposure.		F	B	Discrete	14	Death
921	M	14	United States	Footblack	Never	before exposure.		F	B	Discrete	14	Death
922	M	17	United States	Footblack	Never	before exposure.		F	B	Discrete	14	Death
923	M	45	United States	Laborer	Ch	United States	H	S	B	Discrete		Recovery

925	F	361	United States	Housewife	Ch...	United States	H	T	B	S	Discrete.	Recovery
926	M	191	United States	Tramp	Never	before exposure	...	...	...	...	Confluent	Death
927	F	281	United States	Prostitute	Never	before exposure	H	M	B	F	Discrete.	Death
928	F	21	United States	Prostitute	Ch...	United States	...	...	...	...	Discrete.	Recovery
929	M	5	United States	...	Never	before exposure	...	...	B	S	Confluent	42 Recovery
930	M	7	United States	...	Never	before exposure	...	...	B	S	Confluent	24 Recovery
931	F	21	United States	Public scholar	Never	before exposure	...	...	B	S	Discrete.	30 Recovery
932	F	35	United States	Laundress	1881	United States	B	T	...	...	Discrete.	19 Recovery
933	F	35	United States	Laundress	1881	United States	B	T	...	...	Discrete.	15 Recovery
934	M	3	United States	...	1882	United States	B	T <sup>2</sup>	...	...	Discrete.	16 Recovery
935	M	23	United States	Laborer	Never	United States	...	...	...	...	Confluent	10 Death
936	F	18	United States	Laundress	1882	United States	B	T <sup>2</sup>	...	...	Discrete.	14 Recovery
937	F	25	United States	Laundress	1885	United States	H	M	...	...	Discrete.	20 Recovery
938	M	39	United States	Laborer	1884	United States	H	T	...	...	Discrete.	17 Recovery
939	M	7	United States	...	1884	United States	B	T	...	...	Discrete.	17 Recovery
940	F	7	United States	...	1882	United States	B	T <sup>2</sup>	...	...	Discrete.	16 Recovery
941	F	4	United States	...	Never	before exposure	...	...	B	S	Confluent	35 Recovery
942	M	25	United States	Housewife	Never	before exposure	H	T <sup>2</sup>	...	...	Discrete.	16 Recovery
943	F	28	United States	Railway service	1861	United States	...	...	B	S	Discrete.	22 Recovery
944	F	36	Ireland	Housewife	Never	before exposure	H	T	...	...	Discrete.	18 Recovery
945	F	31	Ireland	Miner	Ch...	Ireland	H	T	...	...	Discrete.	18 Recovery
946	M	4	United States	...	Never	before exposure	...	...	B	S	Discrete.	20 Recovery
947	M	49	Ireland	Miner	(See note)	...	...	...	B	S	Discrete.	21 Recovery
948	M	49	Ireland	Housewife	(See note)	...	...	...	B	S	Discrete.	18 Recovery
949	F	44	Ireland	Housewife	(See note)	...	...	...	B	S	Discrete.	24 Recovery
950	F	40	Ireland	Housewife	(See note)	...	...	...	B	S	Discrete.	18 Recovery
951	M	19	Ireland	Laborer	(See note)	...	...	...	B	S	Discrete.	22 Recovery
952	F	65	United States	Housewife	Ch...	United States	H	T	...	...	Discrete.	18 Recovery
953	M	24	United States	Farmer	Never	before exposure	...	...	B	S	Discrete.	22 Recovery
954	F	17	United States	...	Never	before exposure	...	...	B	S	Confluent	33 Recovery
955	F	16	United States	...	Never	before exposure	...	...	B	F	Confluent	30 Recovery
956	F	8	United States	...	Never	before exposure	...	...	B	F	Discrete.	34 Recovery
957	M	15	United States	...	Never	before exposure	...	...	B	S	Discrete.	28 Recovery
958	F	5	United States	...	Never	before exposure	...	...	B	S	Discrete.	22 Recovery
959	F	2	United States	...	Never	before exposure	...	...	B	F	Confluent	14 Death
960	M	4	United States	...	Never	before exposure	...	...	B	F	Discrete.	30 Recovery
961	M	2	United States	...	Never	before exposure	...	...	B	F	Discrete.	16 Recovery
962	M	49	United States	Housewife	Ch...	United States	H	T	...	...	Confluent	35 Recovery
963	F	1	United States	Housewife	Never	before exposure	...	...	B	F	Discrete.	40 Recovery
964	F	51	Ireland	Housewife	Never	before exposure	...	...	B	F	Confluent	10 Recovery
965	F	22	United States	Dressmaker	(See note)	...	...	...	...	...	Discrete.	...
966	F	1870	United States	...	1870	United States	B	T	...	...	Discrete.	...

NOTES.—Nos. 857 and 888 were very mild cases, and doubt is expressed as to their being variola.—No. 889, "Only one good vaccine scar, on left arm, where he had been vaccinated at about his second year; modified this attack materially. Was vaccinated by his mother a few days after exposure, with human crust, and it pursued a course identical with the varioloid."—No. 906, no evidence of vaccination. "Stated he had had small-pox some years ago."—No. 907, claimed to have been inoculated when a child. Nos. 909 and 911 died of "chronic hypertrophy of heart" and "puerperal fever," respectively. Nos. 915 to 918, inclusive, had been previously vaccinated, but "result" is not stated.—No. 919 claimed to have been inoculated in Ireland, and positively refused to be vaccinated.—No. 920, no vaccinal history given.—Nos. 932, 933, 944 and 946 are noted as "mild cases of varioloid."—No. 948 "was inoculated in Ireland when seven years old."—No. 949, the same.—No. 950, the same.—No. 951, the same.—No. 963, the same.



Tabular Statement—Continued.

Number	Sex	Age	Nativity.	Occupation.	VACCINAL HISTORY.				VACCI- NATED AFTER EXPOSURE.		Character of attack.	Duration of ill- ness—days.....	Result.
					When vacci- nated.	Where vaccinated.	Virus...	Result.	Virus...	Result.			
967	M	7	United States	Private scholar	Never	before exposure.	H	T	F	Confluent	34	Recovery	
968	M	64	United States	Laborer	1882	United States	H	T		Discrete	28	Recovery	
969	M	56	Ireland	Miner	Never	(See note)				Discrete	20	Recovery	
970	F	7m.	United States	Housewife.	Never	United States	B	T		Confluent	6	Death	
971	F	30	United States	Medical student.	1881	before exposure.			B	Confluent	10	Recovery	
972	M	21	United States	Physician	Never	United States		M		Discrete	33	Recovery	
973	M	2	United States	Physician	Never	before exposure.			B	Discrete	22	Recovery	
974	M	23	United States	Physician	Never	United States				Confluent	10	Death	
975	F	28	United States	Housewife.	Never	before exposure.			B	Discrete	30	Recovery	
976	F	26	United States	Farmer.	Never	before exposure.			B	Discrete	22	Recovery	
977	F	18	United States	Housewife.	Never	before exposure.	H	M	H	Discrete	10	Recovery	
978	F	35	United States	Farmer.	Ch	United States			H	Discrete	12	Recovery	
979	F	50	United States	Farmer.	Never	before exposure.			H	Confluent	10	Death	
980	F	2	United States	Farmer.	Never	before exposure.				Confluent	10	Death	
981	M	34	United States	Farmer.	Never	before exposure.				Confluent	10	Death	
982	M	48	United States	Farmer.	Never	before exposure.				Confluent	10	Death	
983	M	19	United States	Farmer.	Never	before exposure.				Confluent	16	Death	
984	M	29	Germany	Laborer	Never	(See note)	H	T		Discrete	30	Recovery	
985	M	36	Germany	Housewife	Ch.	Germany	H	T		Discrete	11	Death	
986	F	41	Germany	Laborer	1855	Germany				Confluent	8	Death	
987	F	9m	United States	Nurse	Never.	before exposure.				Discrete	18	Recovery	
988	F	8	United States	Nurse	Never.	before exposure.	H	T		Discrete	21	Recovery	
989	F	55	Germany	Farmer	1855	Germany	H	M		Discrete	18	Recovery	
990	F	22	United States	Farmer	1861	United States	H	F		Discrete	24	Recovery	
991	F	19	United States	Farmer	1871	United States	H	M		Discrete	20	Recovery	
992	F	21	United States	Farmer	1871	United States	H	T		Discrete	14	Recovery	
993	F	53	United States	Farmer	1841	United States				Discrete	18	Recovery	
994	F	48	United States	Housewife.	1841	United States				Confluent	40	Recovery	
995	M	16	United States	Laborer	Never.	United States	H	M		Discrete	19	Recovery	
996	M	23	United States	Farmer	1866	United States				Confluent	14	Death	
997	M	21	United States	Housewife.	Never.	United States	H	F		Confluent	12	Death	
998	M	56	United States	Farmer.	1841	United States				Confluent	9	Death	
999	M	25	United States	Carpenter	Never.	United States	H	T		Discrete	10	Recovery	
1000	M	41	United States	Miller	Ch.	United States				Confluent	21	Death	
1001	F	17	United States	Housewife.	Never.	before exposure.			B	Discrete	21	Recovery	
1002	F	17	United States	Public scholar	Never	before exposure.			B	Discrete	20	Recovery	
1003	F	15	United States	Public scholar	Never	before exposure.			B	Discrete	20	Recovery	



1901	F	7 United States	Public scholar	Never	before exposure	B	S	8 Death
1905	M	48 United States	Drayman	Never	United States	H	Confluent	6 Death
1906	F	53 United States	Lather	1861	United States	H	Discrete	9 Death
1907	F	49 United States	Housewife	Never	United States	T	S	28 Recovery
1908	F	21 United States	Housewife	Never	United States	T	Confluent	12 Death
1909	F	21 United States	Laborer	Never	United States	T	Confluent	30 Recovery
1910	F	3 United States	Housewife	Never	United States	H	Confluent	7 Death
1911	F	32 United States	Farmer	1851	United States	H	Discrete	10 Death
1912	M	34 United States	Farmer	Never	before exposure	T	Confluent	16 Recovery
1913	M	12 United States	Public scholar	Never	before exposure	B	F	10 Death
1914	F	17 United States	Laborer	Never	before exposure	B	Confluent	10 Death
1915	F	9 United States	Farmer	Never	before exposure	B	Confluent	10 Death
1916	F	60 United States	Farmer	1857	United States	H	S	12 Recovery
1917	F	35 United States	Laborer	Never	United States	T	Discrete	12 Recovery
1918	M	3 United States	Farmer	1882	United States	B	Confluent	14 Death
1919	M	52 Germany	Farmer	1832	Germany	M	F	20 Recovery
1920	M	3 United States	Farmer	Never	Germany	H	Discrete	16 Recovery
1921	M	25 United States	Carpenter	1859	United States	H	Discrete	21 Recovery
1922	M	21 United States	Domestic	1863	United States	H	Confluent	23 Recovery
1923	F	19 United States	Domestic	1863	United States	T	Discrete	15 Recovery
1924	F	10 Germany	Housewife	1843	Germany	T	Discrete	13 Recovery
1925	F	1 United States	Housewife	Never	before exposure	B	Discrete	13 Recovery
1926	F	65 Germany	Farmer	1818	Germany	M	F	20 Recovery
1927	F	49 Germany	Housewife	1834	Germany	H	Discrete	28 Recovery
1928	F	63 Germany	Housewife	1821	Germany	H	Discrete	16 Recovery
1929	F	37 Germany	Housewife	1846	Germany	T	Discrete	14 Recovery
1930	F	25 Germany	Farmer	(See note.)	Germany	H	Confluent	12 Death
1931	F	United States	Domestic	Never	United States	M	Discrete	18 Recovery
1932	F	19 United States	Housewife	1864	United States	M	Discrete	12 Recovery
1933	M	53 Germany	Farmer	Never	Germany	B	Hemorrhagic	12 Death
1934	F	56 Germany	Housewife	Never	Germany	H	Confluent	10 Death
1935	F	29 United States	Housewife	Never	United States	T	Confluent	31 Recovery

NOTES.—No. 967, vaccinated unsuccessfully about three weeks before date of outbreak; "all others in family successfully vaccinated at same time, and escaped infection."—No. 969 was inoculated in Ireland, during childhood.—No. 972 was vaccinated at Keokuk, Iowa, after exposure, but although the arm was "made sore in three places," it had no effect on the disease.—No. 978, "vaccinated a few days after exposure, humanized virus, failure;" subsequently with bovine, result typical, but the febrile stage of variola began synchronously with suppurative stage of vaccinia; am sure the attack of variola was much modified by the vaccination."—No. 979 had been successfully vaccinated in childhood; revaccinated after exposure with both humanized and bovine virus, both taking effect about the same time."—No. 981: "This man's entire family of five, including himself and wife, had variola; none vaccinated until after exposure; vaccination failed in all except one small boy, who was the sole survivor, the other four dying of confluent small-pox; (details not furnished).—No. 992, "claimed to have been vaccinated in childhood, but had no signs of a vaccinal elatrix upon any part of his body."—No. 984, a German immigrant, probably vaccinated in childhood, but no vaccinal history given.—No. 985 "had been vaccinated twice in Germany, when a child and at the age of fifteen; the last vaccination left a typical cicatrix."—No. 1000 "was successfully vaccinated several years before."—No. 1002 "was vaccinated about 7 days before infection."—No. 1003 "had a vaccine pustule when the variola commenced."—No. 1004 "had 3 vaccine pustules when the variola commenced."—No. 1006 "successfully vaccinated 20 years before; also after exposure, but virus was not good."—No. 1016 "at the height of the vaccine vesicles the eruption of variola appeared."—No. 1026 was vaccinated when young, but scar was small and not typical."—No. 1016 "at the height of the vaccine vesicles the eruption of variola appeared."—No. 1026 was vaccinated about time of exposure, and again in ten days; both times with bovine virus; unsuccessfully.—No. 1027 "shows two distinct cicatrices."—No. 1028 has no visible marks of vaccination.—No. 1031 "unsuccessfully vaccinated in Chicago, June, 1881, bovine virus."—Nos. 1034 and 1035 vaccinated when children, in Germany. "Not revaccinated on shipboard or at quarantine."—No. 1036 "miscarried on fifth day, at about fifth month of gestation—very profuse hemorrhage."

*Tabular Statement—Continued.*

Number	Sex	Age	Nativity.	Occupation.	VACCINAL HISTORY.				VACCI-NATED AFTER EXPOSURE.		Character of attack.	Duration of illness—days	Result.
					When vaccinated.	Where vaccinated.	Virus...	Result.	Virus...	Result.			
1037	F	60	United States	Housewife	Ch	United States	H	T	B	S	Discrete	35	Recovery
1038	F	17	United States	Domestic	Never	before exposure.			B	F	Confluent	30	Recovery
1039	M	40	Ireland	Carpenter	Ch	Germany	H	M	B		Discrete	16	Recovery
1040	M	25	Germany	Watch-case maker	Ch	1866	H		B	F	Discrete	21	Recovery
1041	M	18	United States	Domestic	Ch	United States	H	T	B		Confluent	32	Recovery
1042	M	27	United States	Physician	Ch	United States	H		B		Discrete	14	Recovery
1043	M	30	Norway	Sailor	Never	Never					Confluent	9	Death
1044	M	24	United States	Tramp	Never	before exposure.			B	S	Discrete	28	Recovery
1045	F	17	United States	Domestic	Never	before exposure.			B	S	Discrete	20	Recovery
1046	F	74	United States		Never	(See note).			B	S	Discrete	7	Recovery
1047	F	4	United States		Never	before exposure.			B	S	Confluent	36	Recovery
1048	F	30	Germany	Housewife	Never	before exposure.					Confluent	10	Recovery
1049	M	21	United States	Farmer	Never	before exposure.					Confluent	12	Recovery
1050	M	30	Germany	Farmer	Ch	Germany	H	T			Discrete	12	Recovery
1051	F	50	Germany	Housewife	Ch	Germany	H	T			Hemorrhagic	10	Death
1052	F	18	United States	Housewife	Ch	Germany	H	T			Hemorrhagic	12	Death
1053	M	9	United States		Ch	1874	B				Hemorrhagic	22	Recovery
1054	M	51	Germany	Mason		1832	B				Discrete	20	Recovery
1055	M	17	United States	Public scholar		1866	H	T			Discrete	10	Recovery
1056	F	15	United States			1868	H	T			Discrete	10	Recovery
1057	F	13	United States			1870	H	T			Discrete	10	Recovery
1058	M	11	United States			1872	B	T			Discrete	19	Recovery
1059	F	16	United States			(See note).					Discrete	12	Recovery
1060	M	4	United States			(See note).					Hemorrhagic	8	Death
1061	M	5	United States			(See note).					Hemorrhagic	10	Death
1062	F	3m.	United States		Never	(See note).					Hemorrhagic	6	Death
1063	M	9	United States	Public scholar		(See note).					Hemorrhagic	13	Death
1064	F	10m.	United States			(See note).					Discrete	15	Recovery
1065	F	9	United States			(See note).					Discrete	33	Recovery
1066	F	35	United States	Laborer		1882	B	M			Discrete	13	Recovery
1067	M	32	United States	Laborer		1874	B	T			Discrete	13	Recovery
1068	M	35	Germany	Laborer	Ch	United States	H	T			Discrete	12	Recovery
1069	M	25	Germany	Laborer		1855	H				Confluent	23	Recovery
1070	M	30	Germany	Laborer		1855	H				Confluent	27	Recovery
1071	F	20	United States	Blacksmith		1853	B	T			Discrete	22	Recovery
1072	F	30	United States			1881	B	T			Discrete	17	Recovery
1073	F	30	Germany	Housewife	Ch	United States	H	T			Discrete	30	Recovery
				Nurse		Germany					Discrete		

1074	20 United States	Laborer	1873 United States	B	Confluent	26 Recovery
1075	22 Ireland	Laborer	Never	Never	Hemorrhagic	14 Death
1076	40 Ireland		Ch	Ireland	Discrete	24 Recovery
1077	6 m United States		Never	Never	Discrete	27 Recovery
1078	8 United States		1875	United States	Confluent	33 Recovery
1079	20 United States	Housewife	Ch	United States	Discrete	14 Recovery
1080	32 United States		1871	United States	Confluent	23 Recovery
1081	10 United States	Plasterer	M	United States	Confluent	26 Recovery
1082	10 United States		1853	United States	Confluent	7 Death
1083	6 m United States		(See note)		Hemorrhagic	10 Death
1084	25 Germany		Never	Never	Confluent	15 Death
1085	36 Germany	Harnessmaker	Never	Germany	Hemorrhagic	15 Death
1086	30 United States	Blacksmith	1857	Germany	Hemorrhagic	21 Recovery
1087	11 United States		1853	United States	Discrete	18 Recovery
1088	8 United States		1872	United States	Confluent	15 Death
1089	45 Germany	Housewife	Never	Germany	Confluent	17 Recovery
1090	8 United States		Ch	Germany	Discrete	18 Death
1091	10 United States		Never	Never	Hemorrhagic	25 Recovery
1092	22 Germany	Housewife	1861	Germany	Confluent	27 Recovery
1093	40 Germany		(See note)	H	Hemorrhagic	41 Recovery
1094	9 Ireland	Priest		(See note)	Hemorrhagic	16 Recovery
1095	40 United States	Housewife		(See note)	Discrete	43 Recovery
1096	15 United States	Public scholar		(See note)	Confluent	13 Recovery
1097	14m United States	Housewife		(See note)	Discrete	42 Recovery
1098	7 United States		Never	Never	Confluent	12 Death
1099	12 United States		Never	Never	Hemorrhagic	7 Death
1100	20 United States		Never	Never	Hemorrhagic	9 Death
1101	20 United States		1863	United States	Confluent	30 Recovery

NOTES.—No. 1068, "vaccinated just after exposure, with bovine virus; the vaccinal vesicles, two in number, were typical, and a perfect vesicle could be seen side by side with the fully developed small-pox pustule; amount of constitutional disturbance slight for extent of eruption."—No. 1069 "had been inoculated in the old country when a baby."—No. 1041 "went through feely, and is not badly marked."—No. 1042, "vaccinated in childhood; vaccinated unsuccessfully a few days after exposure, and again eight days after; the latter attempt 'began to show signs of working' one day after the first symptoms of variola appeared, and exercised a marked influence in lessening the severity of the disease."—No. 1046 "had natural small-pox when 6 years old; numerous pits on arms and body."—No. 1048 was "vaccinated with poor virus early, several times, and with good virus three days before fever commenced; had no influence on disease."—No. 1050, "varicoid light; no vesicles formed."—No. 1051, "vaccinated in infancy; re-vaccinated in 1876. Both vaccinations worked well, but seemed to have no influence in modifying the attack."—No. 1052, same history as No. 1051; re-vaccinated in 1876. Both vaccinations worked well, but seemed to have no influence in modifying the attack."—No. 1053, same history as No. 1051; and 1056 were very mild cases; No. 1055 "vaccinated in infancy and re-vaccinated a few months previous to attack."—No. 1057, same as No. 1051; and 1058, "vaccinated in infancy; also ten days before attack, and three times after exposure; no result in any case."—No. 1062, "vaccinated from time to time from infancy up;" result not stated.—No. 1094, "vaccinated successfully three months before attack; a perfect, typical eruption, but no protection."—No. 1095, vaccinated three times, 1093, 1094, 1896, 1098 and 1100 are reported to have been "vaccinated after exposure, with bovine virus, no result."—Inclusive, 1097, 1099, 1091, 1092, 1093, 1094, 1896, 1098 and 1100 are reported to have been "vaccinated after exposure, with bovine virus, no result."—Nos. 1069 and 1086 are reported as "not known whether vaccinated after exposure."—Nos. 1097 and 1099, as "not stated."—In Nos. 1059, 1062, 1064, 1065, 1067, 1078, 1079, 1072, 1075, 1076, 1077, 1083, 1085, 1090, 1094 and 1101, vaccination was "not attempted after exposure." The negative results in the 31 cases in which it was attempted are remarkable; but more remarkable still are the statements concerning Nos. 1059, 1060, 1061, 1063 and 1082.





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SMALL-POX AND THE IMMIGRANT.

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## IMMIGRANT-INTRODUCTION OF SMALL-POX.

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IN REVIEWING the operations of the Immigrant-Inspection Service of the National Board of Health, from June to December, 1882, in connection with the history of small-pox in Chicago for thirty-two years, and the testimony of leading health officials concerning the origin and spread of the epidemic of 1880-82 in the United States, the truth of the following propositions seems to be demonstrated:

I.—The immigrant is a prime factor in the origin and continuance of small-pox in the United States—on the one hand, even if protected himself, often being the bearer of the contagion in clothing and other effects; and, on the other, if unprotected, frequently becoming the victim to the disease and propagating it to others.

II.—Local effort and expenditure, either by States or municipalities, are inadequate to the control of small-pox in any given community or commonwealth, so long as the contagion and the material for the propagation of the contagion continue to be replenished by repeated accessions of unprotected or imperfectly protected immigrants.

III.—A continuous sanitary surveillance of immigrant travel, from the port of arrival to the point of ultimate destination—such surveillance to consist of repeated inspections, vaccination of all unprotected, systematic observation of suspicious sickness, prompt removal and isolation of discovered small-pox or other contagious cases, disinfection of baggage, clothing, cars, etc.—is essential to supplement whatever preventive measures can be secured before embarkation, during the voyage, or at the port of arrival.

PROPOSITION I.—*That the immigrant is a prime factor in the origin and continuance of small-pox in the United States.*

The proposition that the immigrant is a prime factor in the origin and continuance of small-pox in the interior, is based upon the following facts:

1.—That the greater or lesser prevalence of small-pox in this country corresponds closely with the greater or lesser number of immigrants received, and with the existence of small-pox in the countries from which such immigrants come.

This coincidence between the greater or lesser prevalence of small-pox, and the greater or lesser immigration, is shown in the following table of small-pox mortality in Chicago, covering nearly a third of a century, and which I have compiled from various sources, embracing my own unpublished memoranda, made while Sanitary Superintendent of that city:

TABLE OF MORTALITY *from Small-Pox in the City of Chicago, from 1851 to 1882, inclusive.*

Year.	January...	February..	March.....	April.....	May.....	June.....	July.....	August.....	September.	October....	November..	December..	Total .....
1851				1	2			1			1		5
1852	2						2						4
1853		2	1	2	2	4		1		1	1	3	19
1854	1	1	1	2	1		2				1	2	12
1855	8	6	2	5	4	1	2	1				3	30
1856	5	2	2	4	2	1							16
1857	1			3	1	2		2			1		10
1858	1			1	1	2							5
1859													
1860						1	1			1			3
1861									1		2		3
1862	1	1											2
1863	4	9	8	9	7	11	4	4	7	10	16	26	115
1864	55	40	37	35	32	19	25	8	6	3	11	12	283
1865	8	18	17	4	5	3		1	1				57
1866	2				1		2	1	1			2	9
1867	1	5	3	8	3	4	8	11	13	20	19	28	123
1868	39	33	35	13	15	11	2					2	150
1869	1	1	2	2	3	3	2	1	3				18
1870	1	1		3	2	5	2	1					15
1871	2	2		1	1	3	3			1	13	47	73
1872	65	54	97	80	68	60	26	29	20	27	63	66	655
1873	62	53	35	44	56	45	52	31	33	32	36	36	515
1874	24	11	8	17	14	7	7	1	1				90
1875		2	3	3	1	1							10
1876			3	5	6	4	3	1	3	2			28
1877			1	3	2	2	4	1	1	4	5	8	43
1878	7	5	2	4			3						21
1879												1	1
1880				9	4	10	3	1	2	3	1	10	43
1881	29	34	31	39	57	66	72	63	116	188	206	274	1,180
1882	345	281	262	150	111	49	24	4	5	21	19	21	1,292
Total .....	646	550	544	428	386	301	242	169	217	312	393	536	4,629

From this table it will be seen that between 1851 and 1858 there were deaths from small-pox each year, the maximum being reached in 1855. Records show that immigration into Chicago, both for permanent residence and for distribution, first attained important proportions in 1853, and continued until 1858, when it was checked by the results of the panic of 1857.

From June, 1858, until the close of 1862, there were only 11 deaths from small-pox in Chicago. But in 1863 there were 115 deaths, and up to the end of June, 1865, there had been 453 deaths. During this period, that is, from the beginning of 1863, immigration again revived, and although some share of the small-pox cases was contributed from the large number of soldiers and prisoners of war at Camp Douglas, the great majority were among newly-arrived immigrants and their friends.



This revival of immigration continued with little change until the spring of 1872, although it was temporarily interfered with by the prevalence of cholera in 1866. In 1872 there was a marked increase of both foreign and domestic immigration into Chicago, attracted by the rebuilding of the city after the great fire. The deaths from small-pox during this year were 655, and up to the close of the epidemic, then begun, were 1,321.

Immigration gradually declined from this point until it reached its minimum in 1879, as a result of the prolonged hard times. For the 16 months, ended November, 1879, there had been no death from small-pox; but in March, 1880, simultaneously with an unusual increase in immigration, began the first cases of the epidemic of 1880-'82.

2.—That small-pox has re-appeared in the city of Chicago at nineteen (19) different times, after periods of entire freedom from the disease; and in fourteen (14) of these re-appearances it is positively known to have been introduced by immigrants, and to have spread directly among and from them.

What is true of Chicago in respect of coincidence between immigration movement and small-pox, is substantially true of the Northern States generally through which or into which immigration flows. But in the case of Chicago, at least, the connection does not rest upon coincidence alone. In the fourteen re-appearances of small-pox in Chicago, during the 32 years, beginning in 1851, and already mentioned, the first cases were introduced directly by immigrants, as follows:

In April, 1851; July, 1852; April, 1857; April, 1858; June, 1860, after a cessation of 23 months; in September, 1861; May and July, 1866; April, 1870; October, 1871; March, 1876; March, 1877; July, 1878; November, 1879, after a cessation of 16 months, excluding one immigrant case in May, and from which no other known case resulted.

All these months, it will be seen, are included in the immigration season, and the majority of them in that portion of the season when the number of immigrants arriving is greatest, viz: March, April, May and June.

My attention was forcibly attracted to this relation of the immigrant to small-pox re-appearance, as cause and effect, by an official experience in Chicago, during the epidemic of 1871-'74. For nearly three months, in 1871, there had not been a single case of the disease in the city; when, on the 16th of October, seven days after the great fire, a party of immigrants arrived from New York, just landed from a Hamburg steamer, and took up their abode in the already over-crowded houses of friends in the Seventh and Eighth wards. As it subsequently transpired, three of the party were suffering from small-pox on their arrival; but, in the confusion which followed the destruction of the city, nothing was known of this fact until the death of one of their number was reported, October 29. This led to an investigation, which disclosed the two surviving cases and three new cases among their friends in the Seventh, and two in the Eighth wards. From these, despite such efforts as could be made under the circumstances, the disease rapidly spread, so that, in November, there were 44 cases in the immediate neighborhood of

the original group, and 24 others scattered throughout the city, nearly all among foreigners. In November, another immigrant arrived with the disease, and in December, two more. By this time the contagion had spread to nearly every part of the city, 223 cases and 47 deaths occurring in December.

Every effort was made to subdue this additional calamity, among other measures rigorously enforced being the vaccination of the large numbers who obtained supplies from the Relief and Aid Society; and—notwithstanding the cold weather, which is an important factor in the propagation and spread of small-pox—the disease was substantially held in check until the month of March, when large numbers of immigrants began to arrive, attracted by the demand for labor in rebuilding the city, and the high rate of wages then paid. Among these arrivals there was the usual proportion of infected—eighty cases, in all, being removed from the railway trains at the various depots during the season.

The remainder of the history to the close of the epidemic may be briefly summed up: Checked by warmer weather, its epidemic proportions were still maintained by immigrants arriving during May, June, July, August and September; directly increased with the increase of immigration in October, which increase was thenceforth maintained, by the cold weather, through the winter of 1872-3; declined with rise of temperature in March, but again increased with the arrivals of immigrants in April, and continuing without marked change until the October immigration and the falling temperature caused a still further increase during the fall and winter. In January, 1874, however, the diminished susceptibility of the population, and the amount of vaccinal protection which had been secured, resulted in a marked decrease, which was maintained until the following April, when the usual influx of immigration was followed by the usual increase in the number of cases; this increase continuing until the end of July, then declining until October, when there was an increase (immigrant), which was lost in November and December; increased in January, 1875; declined in February and March; increased in April (immigrant), and finally disappeared in July, after a continuance of forty-seven months.

3. That the first cases of the recent epidemic were either among immigrants or were contracted in localities already infected by immigrants, in upwards of 75 places in the State of New York; in Pittsburg, Pa.; in Cleveland, Ohio; in Detroit, Port Huron, East Saginaw, Reed City, and many other places in Michigan; in Indianapolis, Michigan City and other places in Indiana; in Chicago and 28 counties (62 times) in Illinois; in Milwaukee and elsewhere in Wisconsin; in St. Paul, Minneapolis, Stearns, Morrison and Wilkins counties, Minnesota; in Davenport and elsewhere in Iowa; in Omaha, Nebraska; and in St. Louis, Kansas City and other points in Missouri.

The following digest of the replies received from correspondents in nine States shows this in fuller detail:

*New York:* ELISHA HARRIS, M. D., Secretary of the State Board of Health, writes, November 8, 1882: \* \* \* "I feel warranted in stating that about 20 per centum of all new outbreaks I have

known in New York the past twenty years were directly traceable to immigrants; but that in the eighteen months prior to July 1, 1882, the number of such outbreaks traced to immigrants was less than ten in a total of fifty new outbreaks and in nearly one hundred places. The greater number of the fifty and the one hundred places derived their contagion from the cities of New York, Brooklyn, Troy, Buffalo, Jersey City and Philadelphia. Yet, in each one of these six cities, I know that the contagion was constantly replenished from Europe or Canada, and thus these foci of infection to the State of New York at large simply distributed to our towns, villages and interior cities. Far more than half of the 150 notifications sent to me from the interior local boards of health in eighteen months ending in July last, were thus indirectly traceable to exotic contagion."

*Pennsylvania:* Dr. W. SNIVELY, city physician of Pittsburg, writes, October 11, 1882: "Small-pox was introduced into this city by immigrants and tramps from the East, *via* Pennsylvania railroad, on January 16, 1881. The disease prevailed extensively and uninterruptedly in this and the neighboring city of Allegheny from that date until July 1, 1882, but no attention was paid during that time to the arrival and passing through this city of immigrants. During the months of July, August and September, 1882, this city was entirely free from small-pox."

*Ohio:* G. W. ASHMAN, M. D., health officer of Cleveland, writes, October 14, 1882: "Small-pox was introduced into this city by immigrants, during the eighteen months preceding July, 1882, in six separate instances beyond all question, and in three other instances there was scarcely a doubt that such was the source of contagion."

*Michigan:* Dr. HENRY B. BAKER, Secretary of the State Board of Health, furnished the following: "During the year ended September 30, 1882, there were over one hundred outbreaks of small-pox, in sixty-one localities, with 589 cases and 159 deaths. Including one outbreak not accurately reported, there were probably over 600 cases and 175 deaths. The source of the contagion, in all the first cases where the source was ascertained, was from outside the State. In twenty-one instances it came direct from Chicago. It was introduced by immigrants direct into Port Huron and Detroit twice each, and once each into two other points, from which it was carried into seven other localities, causing fifty-six cases and seven deaths."

These latter introductions were by immigrants from the same steamer which was the origin of the epidemic in Davenport, Iowa, and concerning which vessel Dr. BAKER reports:

The steamship *Cimbria* sailed from Hamburg March 29, 1882, arriving in New York on April 12, with a case of small-pox on board. Passengers on the *Cimbria* came to Michigan. One, Bettit, went to East Saginaw, where he had varioloid, and communicated the disease to others. In that outbreak there were six cases and one death. A friend from Saginaw City, who watched with the sick in East Saginaw, had small-pox. Another passenger, Gesa, went to Reed City, where he had varioloid, and gave it to four others, one of whom died. Among those who contracted it was a



carpenter who went to Westwood, Kalkaska county, where he was taken sick. From him there were 11 cases in Mancelona, Antrim county; 3 cases in Custer, Antrim county; 29 cases and 5 deaths in Rapid River township and Westwood village, Kalkaska county.

*Indiana:* THAD. M. STEVENS, M. D., Secretary of the State Board of Health, writes, October 12, 1882: "Small-pox has appeared in ten or twelve different localities, and in a majority of cases was introduced by immigrants."

Dr. E. S. ELDER, health officer of Indianapolis, says: "Small-pox was introduced into this city three different times by immigrants, and upon four other occasions by travelers exposed in some unknown manner. At Michigan City I understand it was also introduced by immigrants."

*Wisconsin:* Dr. J. T. REEVE, Secretary of the State Board of Health, writes, November 15, 1882: "We have the record of a number of cases of the disease brought by immigrants, but more, I think, of cases traceable to other States, particularly to Chicago."

R. MARTIN, M. D., health commissioner of Milwaukee, writes: Since July 6, 1881, up to May 27, 1882 (date of last importation), we have had four outbreaks of small-pox by immigrants, as follows:

"July 6, 1881. An immigrant family arrived and put up with friends. Three children of the latter family were taken sick with small-pox, and one died. Infection attributed to clothing of immigrants.

"April 14, 1882. A woman, sick on arrival, died eight days after, and two of her children soon took the disease, and one died.

"May 1, 1882. Six Polish immigrants were taken down a few days after arrival, and a fortnight later two more cases in same house.

"May 27, 1882. Three Germans taken sick immediately on arrival."

*Minnesota:* C. N. HEWITT, M. D., Secretary of the State Board of Health, writes, October 18, 1882: "July 20, 1881, the first case of small-pox occurred (from exposure to clothing of an immigrant) in an infant. The immigrant, a woman, claimed to have been exposed on the steamer; to have been quarantined at the seaboard; vaccinated and clothing disinfected. She had not been sick, nor was she afterwards. From this exposure to infected clothing a large number of deaths resulted."

Dr. D. W. HAND, President of the State Board of Health, writes, November 6, 1882: "We had been almost entirely free from the disease in Minnesota for a long time prior to July, 1881.

"From that case in July, from immigrant clothing, [cited by HEWITT, above,] we can trace nearly all the outbreaks we had in Stearns, Morrison and Wilkins counties, and in Minneapolis and St. Paul."

There were, subsequently, other importations of the infection, reported by Dr. Hewitt, as follows:



"March 7, 1882. Immigrant, male, from Canada, came down a few days after arrival.

"April 1, 1882. German immigrant, taken sick four days after reaching Minnesota.

"April 25, 1882. Scandinavians, broke out some days after arrival; found in a deserted house.

"May 29, 1882. Norwegian immigrant, several days after arrival.

"August 5, 1882. An outbreak from an immigrant family; history not known."

*Iowa:* A. W. CANTWELL, M. D., health officer, Davenport, writes: "The first case was reported April 19, 1882,—Mr. Petersen, confluent small-pox. Passenger by steamer *Cimbria*, from Hamburg, March 29, arriving in Iowa, April 15. From this group of immigrants, consisting of Petersen, wife and child, Mrs. Petersen's brother and his wife, it was learned that one person died of small-pox at sea, and two others, supposed to have the disease, were taken from the vessel at quarantine, New York, where they were detained one day,

"These people had all been vaccinated on shipboard, without effect, and were revaccinated on arrival in Iowa, but too late to protect Petersen and child, the former of whom (April 25) had varioloid, and the latter small-pox. The brother and wife nursed the Petersens and escaped, their Iowa vaccination taking nicely.

"Two children in adjoining houses on the west, and a lady in house adjoining east, contracted the disease from the Petersens. The parents of the children had been opposed to vaccination, and both families, denying that the Petersens had the small-pox, visited the premises and talked with the nurses in the back-yard of the infected house.

"From these cases, it spread westerly—eighteen cases in the west half of the block where the Petersens lived, eleven cases in the next block west—until there were in all a total of fifty-nine cases in the eleven blocks which comprised what came to be known as the 'infected district,' and twenty-two cases, almost exclusively among the Germans, in the rest of the city.

"The total number of cases from this importation by the *Cimbria* seventy-one, with eleven deaths, and the city was not finally freed from the infection until September 4, having lasted nearly five months, to the great detriment of business and direct cost to the municipality and individuals."

*St. Louis, Mo.:* W. B. COXERY, M. D., health department, writes, September 16, 1882, that from April 1, 1881, up to date, there had been 356 small-pox patients sent to hospital at quarantine from the city.

The first case, May 7, 1881, a German immigrant in the city only a few days.

No other cases until September 3, 1881: two German families; disease contracted on shipboard and thoroughly developed before arrival in St. Louis; seven cases and two deaths.

October 19, 1881. Case taken from an immigrant boarding-house; subsequent eleven more cases from same house.

"This is the history of the beginning of this loathsome disease during the past year in St. Louis."

At the Conference on Small-pox, held in Chicago, June 29-30, 1881, the following statements were made:

"All the cases of small-pox in Buffalo this year had either been brought in by immigrants, mostly Polish, or had been contracted from them."—A. H. Briggs, M.D., Health Officer, Buffalo, N. Y.

"Of sixty-two cases now in the small-pox hospital, fifty of the sufferers cannot speak English. Patients arrive in Chicago from New York and Baltimore who have reached the eighth, ninth and tenth day of eruption. In one case a woman, who came by the way of Baltimore, died in four hours after reaching the city. The trouble is that the disease is not always sufficiently developed at the port of entry to enable the inspector there always to detect it."—O. C. DeWolf, M.D., Health Commissioner, Chicago.

"Small-pox was introduced into Iowa in twenty or thirty instances during the spring of 1881. In many of these cases, particularly in the northeastern part of the State, the disease was traced to recently-arrived immigrants."—R. J. Farquaharson, M.D., Secretary Iowa State Board of Health.

"There have been four or five cases of small-pox introduced into Wisconsin this spring, by immigrants."—J. T. Reeve, M.D., Secretary Wisconsin State Board of Health.

Still further, and equally striking proof of the exotic origin of our small-pox epidemics is to be found in the history of the past three years for the country at large. The November 8, 1879, National Board of Health *Bulletin* contained the following:

The mortality tables of the *Bulletin* have for many weeks presented the interesting fact that in more than one hundred of the largest cities of the United States, containing an aggregate population of over eight millions, not a death of a citizen from small-pox has been reported. This is one of the diseases that cannot escape detection and correct diagnosis when it proves fatal. The returns may, therefore, be regarded as entirely reliable in regard to this disease in all cities requiring burial permits. A reference to the tables of mortality in foreign cities, compiled from the weekly consular reports, which are now made with great care and accuracy shows that small-pox is prevailing in various parts of the world, and in certain places with great severity. This is especially the case in some Canadian towns, in dangerous proximity to and in immediate communication with the United States. Considering the certainty with which this most loathsome of all contagious diseases may be prevented, the present exemption of the United States from its presence, its ravages in Montreal, and the unrestricted intercourse between that city and the towns along our borders, emphasize the arguments heretofore advanced in favor of international co-operation in an effort to exterminate contagious and infectious diseases.

There had, indeed, already been an importation of the disease in October from Montreal into Vermont, but during the months of November and December, 1879, there were only 12 deaths reported from small-pox in all the northern States and among a population of over thirty-four millions; while it continued to increase in Europe in countries having direct and frequent communication with us. Early in the spring of 1880 infected vessels began to arrive at New York—in April the *San Stefano* and the *Zeeland*, both from Antwerp. The first death in New York from March 6th to May 15th, was that of an immigrant who arrived May 6th, by steamer *Hapsburg*, from Bremen. Following this were arrivals by the General

Herder from Hamburg; Arizona from Liverpool; Main from Bremen; Allemania from Hamburg; Kings County from Antwerp, and Castalia and Italia from Naples. In June, five Bohemian immigrants, who arrived June 6th., at New York, and were passed through quarantine, developed the disease in Cleveland, Ohio. But prior to this the disease was introduced into Chicago after a total exemption of nearly two years—there having been only three deaths in July, 1878 (immigrants,) and one in December, 1879, from April, 1878, to April, 1880.

*PROPOSITION II.—State or municipal effort and expenditure are inadequate to the control of small-pox during seasons of great immigration movement from infected countries.*

Prior to this epidemic the evidence in support of this proposition was mainly of a negative character. There were, it is true, abundant instances proving the inadequacy of State and municipal effort and expenditure; instances where, notwithstanding the intelligent and well-directed employment of all usual measures, epidemics had continued until either the supply of imported material, or of imported infection, or both, had ceased.

But, during the recent epidemic, complementary proof of a positive character was afforded in a most conclusive manner. Until the inauguration of the Immigrant-Inspection Service of the National Board of Health, June 1, 1882, soon after the arrivals of immigrants had reached their maximum, the average number of fresh importations of the disease, by immigrants, into Illinois, had been eight per month—there being nine in the month of May—exclusive of its almost daily introduction into Chicago, from which centre the infection was carried into over two hundred points throughout the Northwest.

Notwithstanding the efforts of State and local boards of health, these had resulted in numerous outbreaks of the pestilence, which spread panic and alarm among the people, interrupted business, closed schools and churches, gave rise to quarantines, and involved a large expenditure of money in vaccinating, in caring for the sick, in the isolation and disinfection of premises, the destruction of infected clothing and other property, etc., etc.

During the seven months of the service, June to December, 1882, inclusive, there was not a single outbreak in Illinois, due to immigrants, and only two cases developed among the immigrants themselves, after coming within the purview of the Service. And this, too, it should be remembered, in face of the heaviest autumn immigration, with one exception, ever known.

As in Illinois and Chicago, so also in all the other States and places under observation. With the single exception of the outbreak in Minnesota, during the month of August (referred to in the Digest already given,) it is not known that the disease was introduced into any portion of the vast territory covered by this Service, although small-pox cases, in every stage of the malady, were repeatedly arrested by the inspectors, *en route* through New York, Ohio, Indiana, Michigan, Missouri and Illinois.

The service was discontinued December 31, 1882, and up to January 31, 1883, there had been, for seven months, no solitary introduction of small-pox into Illinois by an immigrant. In February, however, there were three such introductions, and in March and April one each. The immigration of 1883 proved to be very light, as compared with that of the previous year; the infection was dying out abroad; at the various seaports the methods inaugurated by the Service were again enforced on the approach of spring, and the resumption of immigrant travel; communities most exposed to this travel in the interior had either been efficiently protected by vaccination and revaccination, or had lost their susceptibility to the infection through the operation of the disease itself; and to these various causes is attributable the absence of immigrant-introduction during the remainder of 1883.

Thus it will be seen that not only is the negative proposition proven, that States and municipalities, acting independently, are unable to control small-pox during seasons of immigration-movement from infected countries; but a positive proposition is equally well-substantiated, to-wit: That the elimination of the factor of imported infection renders the control of small-pox in a given territory a very simple sanitary problem.

PROPOSITION III.—*That a continuous sanitary surveillance of immigrant travel is necessary to supplement whatever other preventive measures can be secured before embarkation or during the voyage.*

On this point I am compelled to admit that my opinions of a year ago have undergone a material modification. I then held that, if immigrant passengers could be inspected and vaccinated on embarkation or during the early part of the voyage, there would be little or no necessity for or inspection after landing. There is no existing authority, of course, to compel such pre-inspection and vaccination. But even if the most perfect international quarantine legislation could be secured to this end, my recent experience, which I have reason to believe accords with that of others under similar circumstances, conclusively proves that not even its *bona fide* enforcement would protect the interior from imported contagion.

. For example: Given the existence of small-pox at the port of embarkation, the exposure of a greater or lesser number of unprotected immigrants during the period of rendezvous is certain. The inspection of such individuals at the time of embarking would reveal nothing beyond the fact that they required to be vaccinated. But, if the exposure ante-dated the vaccination three or four days, they might arrive at New York quarantine with vaccinia visibly progressing, but no evidence of small-pox; and thus be passed on, to arrive at Chicago in the eruptive stage of varioloid. If the vaccination should be deferred until during the voyage, the risk of such results would be proportionately increased. For this dilemma, which grows out of the character of the disease itself, there would be no remedy short of the detention and observation of all unprotected persons for the full period of incubation, say two weeks before embarkation. Such a course is obviously impracticable, and it is idle to expect legislation which would be so radical in its character and so onerous, vexatious and expensive in its enforcement.



In the foregoing illustration of the difficulties in the way of European inspection, a theoretical perfection of service is assumed which it would be folly to depend upon in practice. I am forced to the conclusion, by repeated instances which have come under my own observation, that the sense of responsibility, and consequent thoroughness of work, bear a direct relation to the distance between the inspector or vaccinator and the point of ultimate destination of the immigrant. Inspectors on duty at Liverpool, or Havre, or Bremen, or Hamburg, and surgeons on steamers from those ports, lack the stimulus that an inspector in Chicago feels from the knowledge that, if small-pox should break out among the immigrants passing through his hands, it could be readily traced home to him; not alone from the towns and prairies of his own State, but from the lumber camps and villages of Wisconsin, the wheatfields of Iowa and Minnesota, or from still more remote regions beyond the Mississippi. Such a stimulus is necessary in order to secure vigilance in inspection, thoroughness in vaccinating, and due care in the proper selection of virus—matters which were very generally ignored by the steamship surgeon prior to the establishment of the Inspection Service by the National Board of Health.

In conclusion, it may be well to anticipate the criticism that the foregoing argument ignores everything but the immigrant. It was so intended. Its sole object was to set forth the importance of this factor: to show that an uncontrolled annual influx of hundreds of thousands of immigrants from infected countries (455,884 arrived at the port of New York alone during the year 1882.) is sufficient to largely neutralize the efforts at protection of any community exposed to such influx.

It would not be just, however, to imply that, while doing this, no account is made of the necessity for vaccination and revaccination in each and every community. These, after all, are the real safeguards of any people against small-pox. But granted that these are scrupulously enforced: One general, and one local condition obtain to demand the exclusion of the infection by every possible means. The general condition is that, no matter how faithfully vaccination and revaccination may be carried out, there will still remain a by no means inconsiderable number in whom susceptibility to small-pox cannot be entirely exhausted. It is obviously unjust to subject these to the risk of exposure to the infection if it can be prevented. The local condition, and that which obtains more largely and dangerously in the Western States than elsewhere, arises from the settling in these States of large numbers of unprotected or imperfectly protected immigrants.

Both for themselves and for us the maintenance of a system of sanitary surveillance of immigrant travel during seasons of epidemic small-pox, is of the utmost importance. Such a system was that carried on by the Immigrant Inspection Service of 1882, and which was then demonstrated to be in the interest—

Of our own people, who were secured by it from imported contagion:

Of the immigrant—who was protected through it from the effects of his own neglect\*, and to whom it brought better care and increased comfort in transit across the country:

And to the common carriers of these immigrants—who were relieved by it from the menace of local and State quarantines of exclusion, which would inevitably have been resorted to in the interior, had it not been for the inauguration and maintenance of the Immigrant-Inspection Service.

In the absence of international quarantine regulations and of uniformity in the administration of our maritime and boundary quarantines, the substitution of a simpler, less expensive and more useful system may be possible, but is not probable. Certainly nothing had heretofore been done in this direction which secured the same amount of benefit at the same cost. And this cost, it should be borne in mind, is equitably defrayed from the general treasury, instead of being saddled upon States and communities, which, prior to the inception of this Service, were compelled to protect themselves against evils for which they were not responsible, and whose attendant benefits they shared with others, or had no participation in whatever.

In my opinion, Congress could make few wiser or more useful appropriations, and none which would command a more general and emphatic approval, from the Northwest, at least, than one for the support of some such system.

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\*During the seven months of the inspection season ended December 31, 1882, an aggregate of about 150,000 immigrants was permanently added to the population of the Northwest—of which number 115,057 passed through the hands of inspectors in the Western District. It is probable that no equal number of people in the same region are so well protected against the risk of contracting or propagating small-pox as these. The repeated inspections and vaccinations have resulted in a vaccinal security which will continue during life, in a large majority of them. The work is thus seen to be permanent in its character.

## IMMIGRANT-INSPECTION SERVICE

OF THE

## NATIONAL BOARD OF HEALTH.

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OPERATIONS IN THE WESTERN DISTRICT, COMPRISING THE STATES OF  
INDIANA, ILLINOIS AND MISSOURI, JUNE 1—DECEMBER 31, 1882.

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THE preliminary steps which led to the establishment of the Immigrant-Inspection Service of the National Board of Health have already been detailed in the Fourth Annual Report of the ILLINOIS STATE BOARD (pages xxii and 117-136,) and in the report of the Quarterly Meeting of the BOARD, April, 1882, in this volume (pages xi-xiii.)

Early in April, 1882, the following letters were sent out, the first to members and officers of the various State Boards of Health and to other sanitary authorities; the other to the gentlemen whose names are appended:

SPRINGFIELD, ILL., April 3, 1882.

MY DEAR DOCTOR:

It evidently will not do to await the possibilities of national legislation on the subject of the prevention of further small-pox introduction into our midst by unprotected immigrants. Although the bills now before Congress will, if enacted, enable the National Board of Health to exert its authority without proving the actual infection of a foreign port, prompt relief is promised by the plan indicated in the annexed letter—a plan which is, in effect, that proposed at the Small-pox Conference held in Chicago last June.

While this does not interfere with, or supersede, the proposed modification of the maritime quarantines, it will pave the way for such, and get work done at once which, in any event, should be done some time. Better now than six months hence—the earliest period, probably, in which any practical results could be obtained from new legislation. By that time the bulk of this year's enormous immigration will have been received.

As you are aware, the plan contemplates the thorough inspection (and such necessary action as is implied by the term,) of all immigrants at the ports of arrival in the United States, and their re-inspection at certain westward points until they reach the Mississippi river. By this means it is believed that vacellal protection of the great majority of these persons can be secured before they scatter into the interior. While under our surveillance any cases of small-pox which may be detected will be promptly cared for, and the necessary precautionary measures at once enforced, without exposing communities along the line of travel, or saddling them with the expense or responsibility of their care.

The inspectors, while clothed with the authority of the State and local organizations of their respective territories, would be salaried by the National Board of Health, and the other expenses incident to the service would be defrayed by the same body. To secure this it needs that we unite in a requisition upon the National Board for this purpose, and it is hoped no time will be lost in forwarding such requisition to Washington, in order that the work may begin promptly on the first proximo.

I beg to suggest the forthcoming meeting of the Sanitary Council of the Mississippi Valley, at Cairo, Illinois, on the 19th April, as offering a suitable opportunity for a conference on this subject, and formal action as a basis for the movement of the National Board in the premises.

Trusting you will at once signify your approval of this measure, and your intention to be present at the time and place indicated, I am,

Very truly yours,

JOHN H. RAUCH, M. D.,

Secretary: { *Illinois State Board of Health,*  
                  { *Sanitary Council, Miss. Valley.*

ILLINOIS STATE BOARD OF HEALTH,  
OFFICE OF THE SECRETARY,  
SPRINGFIELD, April, 1882.

DEAR SIR:

With the co-operation and aid of the National Board of Health, the State Boards of New York, West Virginia, Kentucky, Indiana, Michigan, Wisconsin and Illinois, and the health authorities of Pittsburg, Cincinnati, St. Louis, Detroit and Chicago, contemplate an inspection of all immigrants in transit westward (and, if necessary, their vaccination or other treatment,) beginning on the first of May, prox. Suitable provision will be made, at convenient points, for the care of the sick and "suspects," if any such be found.

The almost daily introduction of small-pox into the interior, by immigrants after passing the maritime quarantines, makes the proposed action a sanitary necessity.

It will be the duty of the ILLINOIS STATE BOARD OF HEALTH to exercise this supervision over the trunk lines leading into Chicago, and the BOARD is anxious to discharge this duty with as little interference with the business of the roads, and obstruction to immigrant travel, as are compatible with the protection of the public health.

With your assured co-operation and assistance it is believed that this can be accomplished without exercising the quarantine power and authority vested by law in the BOARD—a power and authority which it is desired to exert only as the last resource. Awaiting your prompt response, I am, Sir,

Very respectfully,

JOHN H. RAUCH, M. D.,  
*Secretary.*

To

D. W. CALDWELL,  
General Manager, Pennsylvania Company,  
Pittsburg, Pa.

JOHN W. GARRETT,  
President, Baltimore and Ohio Railroad Company,  
Baltimore, Md.

JOHN C. GAULT,  
General Manager, Wabash, St. Louis and Pacific Railway,  
St. Louis, Mo.

JOSEPH HICKSON,  
General Manager, Grand Trunk Railway,  
Montreal, Que.

H. B. LEDYARD,  
General Manager, Michigan Central Railroad Company,  
Detroit, Mich.

JOHN NEWELL,  
General Manager, Lake Shore and Michigan Southern Railway,  
Cleveland, O.

Responses to the foregoing letters were prompt and favorable; the requisitions of the various State Boards of Health upon the National Board were at once granted\*; and on the 1st of June, 1882, the Immigrant-Inspection Service was inaugurated. The following abstracts of the monthly reports of the Supervising Inspector to the Secretary of the National Board, embrace the features of general interest in the Western District:

\* See Report of Quarterly Meeting, ILLINOIS STATE BOARD OF HEALTH, April, 1882, *ante* page xii.



## FOR THE MONTH ENDED JUNE 30, 1882.

Inspections were begun June 1st, on the Chicago, Pittsburg & Ft. Wayne Railroad, by Assistant Inspector Starkweather; on the Michigan Central, by Assistant Inspector Bundy; and on the Lake Shore & Michigan Southern, by Assistant Inspector Kiernan. On the 5th of June Drs. Farrell and Newton were assigned to duty as assistant inspectors on the Grand Trunk and the Baltimore & Ohio roads, respectively. The foregoing are the main trunk lines entering Chicago. Assistant Inspector Conery, assigned to duty June 1, took charge of the Vandalia, the Ohio & Mississippi, the Wabash, and the Indianapolis & St. Louis roads, crossing the Mississippi river at East St. Louis, and Assistant Inspector Elder, assigned to duty June 20, inspected the trains arriving at Indianapolis over the Pittsburg, Cincinnati & St. Louis, and the Chicago, Columbus, Cincinnati & Indianapolis roads.

The service being largely experimental, general instructions only were given the inspectors during the first week, but these were supplemented from time to time as experience pointed out needed modifications.

### *Documentary Evidence of Protection:*

Much of the work in the District was necessarily dependent upon the operations of inspectors at points farther east. It was discovered during the first week that but little reliance could be placed upon mere documentary evidence of protection. The steamship surgeon's protection card seemed to be issued, in many instances, with an entire disregard even of probabilities. It was found in the hands of persons who could exhibit no other proof either of being protected by a previous attack of small-pox or of ever having been vaccinated. It was traded around, exchanged, and used again by new-comers after having served its purpose with the original holder. Even during the last week of the month a young unmarried woman presented a card for a mother and four children; on inquiry it was ascertained that she had obtained the certificate from a woman who had left the train before its arrival in this district.

It was also found that these cards and certificates were not only thus improperly issued and used, but in many instances were endorsed without examination by the inspector. In one instance a number of passengers by the steamer Illinois were found to have had certificates of domestic, social and religious status, given by priests or pastors, countersigned as vaccination certificates by one of the Eastern inspectors.

On June 6th, a death from variola occurred at Rock Island, the victim being one of a party of seven German immigrants who arrived in that city all duly provided with the steamship protection card. Of the seven, one died as above; three had varioloid, and the remaining three were successfully vaccinated. A similar case occurred at Elgin—the immigrant, also a German, contracting the disease during a brief stay in Chicago, notwithstanding his protection card.

These and kindred facts led to the issue of specific instructions to the assistant inspectors at the close of the first week, to vaccinate or revaccinate all persons coming under observation, so far as there was time and opportunity, without regard to any evidence of protection not corroborated by personal examination.

### *Work of the Inspectors:*

These instructions were reiterated from time to time, and the inspectors urged to the greatest possible vigilance and thoroughness, so that during the last week of June fully 25 per cent. of the total number of immigrants arriving in this District had been vaccinated or revaccinated by the assistant inspectors, while during the first week less than five per cent. were so treated.

In order to accomplish this result, it was found necessary to dispatch the inspectors to greater distances from Chicago to meet the incoming trains than was at first contemplated. On the P. and Ft. W. the inspector went as far as Plymouth, Ind., 84 miles out; on the Lake Shore the trains were met at Elkhart, Ind., 101 miles out; on the B. and O. they were met at Milford junction, 123 miles from Chicago; on the Michigan Central at Kalamazoo, 141 miles, and on the Grand Trunk at Vicksburg, Mich., over 150 miles from the city. The above are the maximum distances.

This service proved to be quite arduous; trains arrived irregularly; sometimes were run as specials, sometimes the immigrant cars were attached to regular trains, and sometimes the immigrants were carried in the regular passenger coaches. Where immigrants were transferred from one line to another a new set of complications arose, rendering it difficult, sometimes impracticable, to secure information in season to meet the train at a sufficient distance from the city to make as thorough inspections as were desirable, and in some cases the regular hour of arrival in Chicago was so early as to leave little time. On the Pittsburg and Ft. Wayne, for example, Assistant Inspector Starkweather was obliged to go out every night and remain either at Valparaiso or Plymouth to meet the incoming train at 5 o'clock in the morning. Even this gave him only from two to four hours for inspection before reaching the city, but it was impossible to do better than this, since the work required to be done in daylight. At East St. Louis the inspector met the early train on the Ohio and Mississippi at 5:30 A. M., and during the succeeding four hours had to look out for the trains over four roads, repeating this again between 5 and 9 p. m. Obviously, he was able to do little more than satisfy himself of the absence of any suspicious form of sickness, and to accept the exhibition of the protection card, but without in all cases satisfying himself as to the evidence upon which it was based.

The inauguration of inspections at Indianapolis to some extent remedied this defect—certificates of Inspector Elder's vaccinations being noted at East St. Louis before the close of the month.

### *Co-operation of Railway Companies:*

As a rule every facility was afforded by the railway companies, and agents, conductors and train men rendered valuable assistance. In some instances the emigrant agent accompanied the inspector, and, by his knowledge of the habits of the people, familiarity with their dialects, and his official position materially facilitated the work.

### *Vaccination on Shipboard:*

An increasingly large number of vaccinations on shipboard, as well as some by eastern inspectors, were noted toward the close of the month. There was, however, a great disparity in the character of the work done on the steamers. On some the percentage of successful vaccinations was quite large, on others the reverse; and the contrast was so marked as to lead to the belief that the failures are due mainly to carelessness either in performing the operation, or in the selection of the virus. Inspectors report that some of these failures however, were due to the fact that the immigrants washed the virus off as soon as possible, and that it was necessary to watch them even on the trains lest they do so.

### *Suspicious Cases in Transit:*

During the month only two cases presenting sufficiently suspicious symptoms to warrant such action were removed to hospital in this District, although a large number of cases of measles were met with. In two or three instances these had been telegraphed from eastern points as cases of small-pox, but the mistake was always detected in season to prevent any serious consequences.

Arrangements were perfected with the local health authorities for the reception and care of cases in the established hospitals—among these being with the authorities of the town of Lake whereby patients arriving via the Lake Shore and the Pittsburgh and Ft. Wayne roads could be transferred from the trains at Sixty-third street, some eight miles from Chicago, instead of being brought up into the city, and then transported three or four miles through thickly crowded streets. Cases coming under the charge of the service at Indianapolis and at East St. Louis would, in like manner, be cared for in the hospitals of Indianapolis and St. Louis, respectively.

### *Effect of First Month's Operation:*

Although not yet perfect the operation of the service was of undoubted value even in these few weeks. In April there were 332 cases of small-pox in Chicago, in May, 281; while in June, notwithstanding the enormous immigration, there were only 124 cases.

Health Commissioner Dr. O. C. DeWolt attributed this large reduction in June in great part to the action of the Service.

In the State at large (Illinois,) while for the previous eight months there had been an average of eight importations by immigrants per month (there being nine during the month of May), there was only one which could possibly be attributed to this source during the month of June.

Appended is the tabular statement of the number of inspections and of vaccinations by each inspector during the period.

Inspectors.	Railroads.	Persons inspected.	Persons vaccinated.	Locality.
R. E. Starkweather, M. D. . . . .	Chi., Pittsburg & Ft. Wayne.	5,683	592	Chicago. . . . .
W. F. Bundy, M. D. . . . .	Michigan Central. . . . .	7,715	1,565	Chicago. . . . .
*J. J. Farrell, M. D. . . . .	Grand Trunk. . . . .	4,028	1,350	Chicago. . . . .
S. G. Kiernan, M. D. . . . .	Lake Shore. . . . .	4,641	415	Chicago. . . . .
*F. C. Newton, M. D. . . . .	Baltimore & Ohio. . . . .	2,439	242	Chicago. . . . .
*W. B. Conery, M. D. . . . .	Van., O. & M., Wab., I. & St. L.	1,511	44	East St. Louis.
§E. S. Elder, M. D. . . . .	P. C. & St. L., C. C. C. & I. . .	1,080	48	Indianapolis . .
Totals. . . . .		27,097	4,256	

\*From June 5 to June 30, inclusive. †Inspections prior to June 8, not included in this number—being informal and general. §From June 20.

### FOR THE MONTH ENDED JULY 31, 1882.

During the month an aggregate of 31,000 immigrants were inspected by the assistant inspectors, who found about sixteen per cent. of these unprotected, liable to contract small-pox and to propagate the disease. The necessary precautions were taken with all these cases, as well as with one case of varioloid found in transit, and several convalescents, one being an immigrant removed from a train and treated in the small-pox hospital at Rochester during the month of June.

### *Vaccination on Shipboard:*

Although there was a marked improvement in the character of the protective work done on shipboard, as compared with that noted on beginning inspections, it was by no means uniform, as will be seen by the following extracts from the assistant inspectors' notes of careless, imperfect or neglected vaccinations and revaccinations:

Steamship Republic.—"Practically worthless; no adult vaccinations."

General Herder.—"None showed successful vaccination."

\*Strasburg.—"Very poor; only eleven successful out of 340 vaccinations—result evidently due to want of care on the part of steamship surgeon."

\*Hermann.—"Only thirteen properly protected out of 410; the vaccination performed on shipboard very unsatisfactory. All passengers provided with "protection cards."

Rhyndland.—"None showed successful vaccination on shipboard."

Mosel.—"No successful vaccination by the ship's surgeon."

Jason and Sardinia.—"No ship vaccination met with in passengers from either vessel."

St. Germain, Ethiopia and Wieland.—"None vaccinated on shipboard; many totally unvaccinated children provided with ship's protection cards."

Main and Surrey.—"Nearly all unsuccessful."

Britannic and Italy.—"Vaccinations on shipboard generally poor."

Devonia and Warwick.—"Over one-half of the passengers by these two steamers were found to require vaccination, although all were furnished with ship's surgeon's cards, which, they had been told, would prevent any other physician from interfering with them."

City of Brussels.—"Extremely little attention appears to have been given to the examination of its immigrant passengers while on board. One of these passengers, a Finn, 28 years old, was found on a train nearing Chicago, July 21; was in the eruptive stage—probably 80 hours old. He presented a vaccination-protection card, signed William Gibbons, Surgeon SS. City of Brussels, and dated July 20, 1882."

Illinois.—"A few only vaccinated."

Nebraska.—"Poorly revaccinated."

Indiana.—"Two-thirds required revaccination. No cards had been furnished any immigrants."

Concerning these cards it is noted that in many instances they bore no name of steamship or line. One such, presented by a lad 13 years old, and without the slightest vaccinal protection, bore the name of "John W. Watson, Surgeon."

On July 28, among passengers by the steamer Erin, were found ten convalescents who had had small-pox within a month before leaving Ireland.

#### *Increased Proportion of Inspections:*

Notwithstanding that the aggregate number of inspections was less in July than in the preceding month, the relative number was much larger. Immigration had fallen off about one-half since May, and it was believed that of the total number arriving very few found their way into Illinois or across the State without being subjected to one or more rigorous inspections. The reports of small-pox outbreaks in the region west of the Mississippi river were notably less during July, while in Illinois there was not a single case reported during the month, outside of Chicago. The following table shows the steady decline of the disease in that city:

Month.	Cases Reported.	Deaths.
April.....	321	92
May.....	281	65
*June.....	124	29
July.....	44	11

\*Inspection begun June 1.

At the close of the month there were only ten cases under treatment in the city, and one in the State at large.

#### *The Service in other Districts:*

In other districts of the Service it was observed that increased familiarity with the work had secured increased efficiency, and thus materially lightened a labor which was found to be very onerous during the first month. For example: The vaccinations found to be necessary among passengers arriving over the Grand Trunk road in June were very nearly 36 per cent. of the total inspections; during July, owing to the increased number of vaccinations at Port Huron, Mich., this percentage was reduced to 8.3 per cent.

#### *Other Sickuess among Immigrants:*

Many cases of cholera infantum, measles and whooping cough were met with by the inspectors, who, so far as time and opportunity served, rendered such medical assistance as was necessary.

\*These vessels, the Strasburg and Hermann, are regular Baltimore packets, and the latter, at least, is known to have been the means of introducing small-pox into five localities in Illinois during the past spring. It might be profitable to inquire to what extent such vessels and the neglect of their surgeons are responsible for the present prevalence of small-pox in Baltimore.



### The Railway Service:

The railway service continued to afford every desired facility to the inspectors, and aside from the advent of an occasional unannounced train over a connecting line, every emergency was promptly met. The coaches for immigrant passengers were, as a rule, kept in good sanitary condition, and the general welfare of these people seemed to be consulted on business principles.

#### Inspections and Vaccinations by the Assistant Inspectors, June 1 to July 31, 1882.

Inspectors.	Stations.	JUNE.		JULY.		JUNE 1 TO JULY 31	
		Number Inspected	Number Vaccin'd.	Number Inspected	Number Vaccin'd.	Number Inspected	Number Vaccin'd.
R. E. Starkweather, M. D.	P. Ft. W. & C. R.	5,895	592	3,452	398	9,347	990
Jas. G. Kiernan, M. D.	L. S. & M. S. R. R.	4,641	415	1,828	517	6,469	962
W. F. Bundy, M. D.	M. C. R. R.	7,515	1,565	5,835	1,481	13,350	3,049
J. J. Farrell, M. D.	Grand Trunk Ry.	4,028	1,450	2,551	212	6,579	1,662
F. C. Newton, M. D.	B. & O. R. R.	2,439	242	2,398	498	4,837	740
E. S. Elder, M. D.	Indianapolis.....	992	43	3,679	268	4,671	311
W. B. Conery, M. D.	E. St. Louis.....	1,511	44	1,784	41	3,295	85
Totals.....		27,021	4,351	20,927	3,448	47,948	7,799

#### FOR THE MONTH ENDED AUGUST 31, 1882.

An aggregate of 16,014 inspections were made by the seven assistant inspectors, who performed 3,125 vaccinations upon immigrants found to be either imperfectly or not at all protected by previous vaccination or attack of small-pox. This is in the ratio of about twenty per cent. of vaccinations, as against sixteen per cent. during the months of June and July.

It is not to be inferred from this, however, that the proportion of unprotected immigrants was larger than in the previous months. On the contrary, increasing evidence was found throughout the month of greater care and vigilance on the part of steamship surgeons generally, and of some of the inspectors east of this district—notably at Port Huron, Mich.—and a much larger proportion of recent vaccinations were met with as the result of this care and vigilance.

#### Varying Proportions of Protected and Unprotected Arrivals:

An analysis of the inspectors' reports shows the highest ratio (nearly thirty-eight per cent.) of vaccinations to inspections to have been made among immigrants arriving *via* Baltimore. And this is due to the cause indicated in the last report, namely, the neglect of surgeons of steamers arriving at that port to enforce vaccination, although there has been a very decided improvement in this respect during the past month, as will be seen in the comments of inspectors quoted below.

Aside from this cause—which is exceptional—the increased facility with which inspections are made, as the result of experience and familiarity with the work, and the smaller number of arrivals during the month, whereby inspectors have been enabled to devote more time to each individual (always vaccinating the doubtful cases) sufficiently account for the increased proportion of vaccinations.

The smallest ratio of vaccinations to inspections—in other words, the smallest number of unprotected immigrants out of a given number arriving in this district—was that among passengers by the Grand Trunk Railway. Only three and a half per cent. of these were found to need vaccination by the Illinois inspector, that work having been thoroughly performed by the inspectors at Port Huron. The ratio on this road steadily declined from 36 per cent. in June to 8.3 per cent. in July and 3.5 per cent. in August. During the latter part of the month all of the arrivals by this road were found to be protected.

In the Western District, thus far, a little over 96 per cent. of the unprotected arrivals have been vaccinated by the inspectors within the district, before entering or crossing the State—the 3 or 4 per cent. escaping vaccination being composed of cases where contra-indicating conditions existed, or where the operation was refused.

#### Small-pox in the State:

The necessity for this mode of excluding imported small-pox contagion received signal confirmation during the month by two local outbreaks of the disease in Illinois, showing that, notwithstanding all the efforts made to secure the proper vaccinal protection of the State, there were still localities where the introduction of the infection was sufficient to discover unprotected individuals enough to cause considerable alarm. \* \* \*



With these exceptions, there was only one case of varioloid in the State (outside of Chicago) since June 23. The case referred to was that of a farmer returning to Paxton, Ford county, from France, with a cargo of imported horses. He was carried on a Danish stock boat, the Friga, and contracted the disease from a stock-man on board, who was suffering with a mild case of varioloid. The attending physician writes that "there was no examination at New York," and as the man did not travel as an immigrant, he, of course, escaped inspection by the Service.

In Chicago there were only 24 cases and 5 deaths during the month, and at the close of the month there were only 3 cases under treatment in hospital, and 2 in the city.

To the table presented last month are now added the figures for August, showing the continued decline in that city since beginning inspection:

Month.	Cases reported.	Deaths.	Remarks.
April.....	321	95	Inspection began June 1.
May.....	281	65	Average decline before inspection, 12
June.....	154	29	per cent.
July.....	44	11	Average decline since inspection, 78
August.....	24	5	per cent.

This result plainly demonstrates that no matter how efficient a health department may be within its own limits, nor how general and thorough vaccination may be made in a given community, large cities like Chicago must be protected from without against laches and defects in the administration of seaboard quarantines in order to escape the effects of continuous importations of foreign contagion.

#### *The Service in Adjoining Territory:*

During the month the Supervising Inspector made some observations upon the operations of the Service in adjoining territory. Going to Montreal along the line of the Grand Trunk Railway, he visited Lansing and Port Huron, in Michigan, and at the latter station spent some time with Inspector Mills and his assistants. Their work seemed to be very thorough and efficient. During the last twenty-six days of August the probabilities are that not a single unprotected immigrant had been allowed to pass this station.

The absence of the Canadian health officials prevented any extended study of the work in the Dominion, and he was disappointed in not being able to await the arrival of a steamer at Quebec, having intended to observe the operation of the quarantine service at the port of arrival, and then to accompany the newly-arrived immigrants from their debarkation to the Western District. Returning from Montreal to Port Huron, and thence to Detroit, sufficient time was spent with Inspector Mulheron to become satisfied concerning the character of the work there. A larger number of vaccinations were being performed at the Detroit station than hitherto.

Leaving Detroit on an immigrant train, over the Michigan Central, abundant opportunity was afforded to note all the conditions of this form of travel. Among other results of the Inspection Service it was evident that there was a very marked change in the conduct of the immigrants themselves; that they were more cleanly in their habits, and took better care of themselves and families. Not a single sick child was found among these 351 passengers—a most noteworthy instance, and one without parallel in previous experience. The railway officials confirmed the Supervising Inspector's observations by their own statements. These evinced a lively interest in the Service, recognizing its contingent personal benefits, and always affording a ready assistance to the inspector in the discharge of his duties.

#### *Objections to Long-Trip Through Trains:*

The same condition elsewhere condemned with reference to long-trip through trains, was found to obtain in an aggravated degree upon these immigrant trains. Inspector Starkweather makes the following comments upon the matter in his summary for the month:

"Repeated observations in regard to the sanitary condition of the cars occupied by the immigrants have greatly impressed me with the very decided differences to be met with between those coaches that were sent from New York to this city, and those coaches that were sent only from Pittsburgh or Mansfield; in other words, between the condition of the cars in the through or so-called solid trains and those made up half way between the points named, as at Pittsburgh or Mansfield. As a rule, immigrants from New York City or Philadelphia, by Pennsylvania R. R., and Pittsburgh, Ft. Wayne and Chicago R. W., are obliged to change cars at Pittsburgh. Those traveling *via* N. Y., Penn. and Ohio R. R., and the New York, Lake Erie and West. R. R., its connecting link, were very often conveyed the whole distance to this city in the same car.

"I have seldom found a car to be free from foul air, or to be clean either in respect to its aisles or floors, its seats or closets, which has carried its full complement of immigrants—(averaging about forty [40] people to the car)—from New York City to Chicago, without change.

"It would also be a good sanitary measure if the tank holding the drinking water were to be located outside of the water-closet compartment, instead of occupying the location now generally assigned to it, even in the best of passenger coaches."

*Comments on Steamship Surgeons' Work:*

It will be noted in the following extracts from the assistant inspectors' reports that occasion was found to speak approvingly of a much larger share of the steamship work than ever before:

SS. Rhein, of the North German Lloyd's.—"The surgeon has made a most excellent inspection of his people, and performed a large number of very effective adult revaccinations."

Waesland.—"The inspections by Surgeon Burroughs have been exceedingly thorough. His adult revaccinations numerous and effective."

Malta.—"The surgeon has been very particular in vaccinating. Those requiring vaccination who have arrived by this vessel are very few."

Ohio.—"These passengers had been very thoroughly inspected, and the surgeon had performed a number of very fine adult revaccinations."

Elbe.—"Her surgeon had made a very rigid and excellent inspection, and had done a large number of good adult revaccinations."

British Crown.—"The work of Dr. Bullock, of the British Crown, merits very high commendation for its thoroughness and efficiency."

Celtic.—"Some very excellent adult revaccinations."

Hohenstaufen.—"Surgeon's inspection very rigid. A very large number of vaccinations had been performed on or about July 24, but, judging from the result, the material used appears to have been very inert."

City of Richmond.—"The [vaccinations on board this vessel have been very effective."

Herder.—"The surgeon had vaccinated nearly every one of his adult immigrants; the method employed, however, is not well calculated to produce a typical scar."

Hermann.—"Inspections on this trip seem to have been thorough, and vaccination or revaccination general and tolerably successful."

On the other hand—

SS. Neckar.—"Attention is called to the marked difference in the results of the vaccinations on the two steamers Neckar and Rhein. On each steamer nearly every passenger was vaccinated. On the Neckar, result, total failure; on the Rhein, remarkably good results were obtained."

Hekla.—"All the immigrant passengers had been vaccinated on the vessel, and none were successful."

Polynesia.—"Of 54 vaccinations performed on board, only two were successful. It was found necessary to vaccinate 74 out of 164 of her passengers found on this train."

Indiana.—"No cards had been issued to the passengers on this vessel, and few, if any, vaccinations had been performed. The vessels of this line do not, so far as can be ascertained, pay any attention to the inspection of their passengers, nor do they seem to be required to do so at that port (Philadelphia). I have never seen any indications that there is a medical inspector of immigrants on duty there."

State of Georgia.—"Many adults requiring vaccination had been allowed to pass inspection."

Parthia.—"The ship vaccinations were either total failures or resulted in very doubtful vesicles."

Leipsig.—"Of 394 passengers by this vessel, 181 were found more or less unprotected, and requiring vaccination. Not one among the number showed a recent successful vaccination, and only a few bore any evidence of having been inspected on shipboard, although all were furnished with protection cards."

"Very little attention is paid to adult vaccination" by the surgeons of the Allemand, Amerique, Vaterland, Bothnia and Switzerland.

"No inspections of any value" appear to have been made by the surgeons of the Pollux, Plantyn or Leipsig.

Inspections by the surgeons of the steamers Alaska, City of Rome, Cimbria, Edam, Egyptian Monarch, St. Laurent, Nemesis, Parthia and Britannic appear to have been very superficial."

*Abuse of the Protection Cards:*

Protection cards were found in the possession of unvaccinated individuals from the steamers Wyoming, Salier and Frisia.

The protection cards issued by the steamers Helvetia, Frisia, Parthia and Westphalia bore no name of steamer or line, and valuable time is lost in identifying such cards by other evidence.

Inspector Bundy (Michigan Central) says of his inspection, August 13:

"Such as are vaccinated at Port Huron or Detroit have the ship's card taken away, and the inspector's card given instead. This makes it tedious and in many cases impossible to ascertain the names of the vessels on which they sailed.

"One child, five months of age, was not vaccinated, the surgeon of the Donau saying it was not necessary, but giving it a card.

"From steamer Thingvalla, 204 passengers, no successful ship vaccinations, but 91 vaccinated at Port Huron. In these eight coaches I found 12 vaccinations working, and 147 Port Huron vaccinations.

"The three car-loads at rear of train had been thoroughly revaccinated at Port Huron. This train showed evidence of more thorough inspection since leaving the seaboard than any train previously seen."

On a train over the M. S. & L. S., on August 13, five Bohemians were found recently recovered from variola, which had been very prevalent in their village three weeks before they left. The inspector reporting this, adds that: "The practice of taking passengers from way stations and allowing them to ride in the immigrant cars is certainly objectionable. These passengers resist inspection and encourage the immigrants to do the same. There is a possibility, of course, that in this way contagion may reach various districts."

The appended table shows the number of inspections and vaccinations by each inspector for the month and for the total period, June 1 to August 31:

*Inspections and Vaccinations by the Assistant Inspectors, June 1—August 31, 1882.*

STATIONS.	June and July.		August.		June 1—Aug. 31.	
	Number inspected	Number vaccinated.	Number inspected	Number vaccinated.	Number inspected	Number vaccinated.
P., Ft. W & C. R. R.....	9,347	990	2,918	541	12,265	1,531
L. S. & M.S. R. R.....	6,469	962	2,754	662	9,223	1,624
M. C. R. R.....	13,350	3,049	2,942	950	16,292	3,999
Grand Trunk R. W.....	6,579	1,662	709	25	7,288	1,687
B. & O. R. R.....	4,837	746	1,609	603	6,446	1,349
Indianapolis.....	4,071	311	3,313	248	7,384	559
East St. Louis.....	3,295	85	1,769	96	5,064	181
Totals.....	47,948	7,799	16,014	3,125	63,962	10,921

### FOR THE MONTH ENDED SEPTEMBER 30, 1882.

During September there arrived and were inspected a total of 14,404 immigrants, of which number 2,918 or about one-fifth, were found imperfectly or not at all protected against small-pox, liable to contract the disease and to propagate the contagion. Of these, 234 had never before been vaccinated, among which were many adults.

There were found in transitu five cases of small-pox which were removed to hospital in St. Louis and Chicago respectively, the necessary precautions taken with those who had been exposed, and the cars and belongings thoroughly cleansed and disinfected. Of these cases, the inspectors made full and detailed reports, that of Inspector Starkweather being as follows:

September 6:—Found a case of modified small-pox in the person of a single woman, thirty-nine years of age, coming from a small town near Manchester, England, and bound for Neenah, Wisconsin. She had been vaccinated only once—then in infancy. She presented a card of which the following is a copy: (No date to the card.)

CUNARD LINE.

**VACCINATED.**

S. S. SCYTHIA.

(Signed)

W. J. KING, Surgeon.

On the obverse was the following, printed in English and four other languages: "Keep this card to avoid detention at quarantine and on railroads in the United States."

The patient occupied passenger car No 424 of Penna R. R. The rash appeared on Monday A. M., September 4, at or before the time of leaving the ship. The ship's surgeon did not look at her arms, she said, nor so far as I could ascertain, did he do any vaccinating of his people, and made only a very superficial and worthless inspection. The eruption must have appeared sixty hours before the time I first saw her. It was located upon the forehead, cheeks, neck and upper extremities somewhat abundantly; none apparent upon lower limbs. The patient said it was prickly heat, and that she would soon be over it if allowed to go on to Neenah.

Oscar C. DeWolf, M. D., health commissioner of this city, saw the patient with me in consultation on the car at my request, partly to satisfy the patient, and partly to protect the Inspection Service and railroad corporation against possible malicious action for damages in the future. She made no opposition to being taken in the ambulance to the small-pox hospital. The car was thoroughly fumigated by the city health department, and the necessary instructions were given to the railway company concerning its present use.

I vaccinated sixty-five adults, who had been more or less exposed on the train, the railroad officials cheerfully and courteously rendering every useful assistance. Two of the people whom I vaccinated at their own request, belonged to the crew of the train.



### *Small-pox in the State:*

This case was detected before leaving Valparaiso, Ind., but partly owing to want of facilities at any point nearer than Chicago, it was brought on to the latter city for treatment—every precaution being meanwhile taken to prevent any exposure of others during the remainder of the journey.

The cases, four in number, removed to the hospital in St. Louis, were detected while still in Illinois. These were found among a party of Bohemians bound for Missouri; have all since convalesced and been discharged. So far as ascertained, no other cases were caused by these.

The importation into Ford county, Ill., detailed in the August report, gave rise to three other cases, of which one terminated fatally. (This was the importation by a horse-dealer returning from France on a stock-boat, the *Friga*, which boat, it is alleged, escaped inspection at New York quarantine. The horse-dealer, Hefner, contracted his disease from a case of modified small-pox which occurred during the voyage. As he did not travel as an immigrant in this country, he was not seen by any of the inspectors.) The outbreak was confined to one family. \* \* \*

### *The Work of the Steamship Surgeon:*

Concerning the character of the protective work done by steamship surgeons, there is still the same disparity noted as has been commented upon before. Passengers arriving by vessels of the same line present the most marked contrasts. On one, the surgeon will have made a careful inspection and have vaccinated or revaccinated all unprotected or doubtful cases; on the very next arrival by the same line, evidences of gross carelessness will be found in children of all ages holding the surgeon's cards, but without any personal evidence of ever having been vaccinated; and, in the case of adults, not revaccinated since infancy, but similarly equipped with cards to secure them, in several languages, "against detention at quarantine and on railroads in the United States."

Copies of previous reports forwarded to the officers of the various lines, have in many cases, it is believed, been productive of improvement in this respect; but the steamship medical service is not yet by any means what it should be in its treatment of immigrant passengers with regard to the preservation of health. In the absence of any adequate National legislation prohibiting the introduction of foreign pestilence, and the want of proper State and local legislation, there seems to be no better method of securing the desired result, under present conditions, than by giving publicity to the character of the work done by each surgeon, as shown in the condition of the immigrants passing through his hands and arriving in the interior.

Unprotected immigrants, susceptible to small-pox and capable of propagating the contagion, were received in this District during the month of September, from the following vessels:

Abyssinia, Guion line, Surgeon Satterthwaite; Arizona, Guion line, Surgeon Luttrell; Australia, Carr-Hamburg line, Surgeon Carr; Bermuda, line and surgeon not given; Britannic, White Star line, Surgeon O'Laughlin; British Crown, American line, Surgeon Bullock; Canada, Trans-Atlantic company, Surgeon Guichard; Circassia, Anchor line, Surgeon Faulds; Circassian, Anchor line, surgeon's name not learned; City of Chester, Inman line, Surgeon Irwin; City of Montreal, Inman line, Surgeon Parker; Dupuy de Lome, Compagnie commerciale des transports a vapeur francais, Surgeon Ruby; Edam, Netherland-American steam navigation company, Surgeon Cruims; England, National line, Surgeon Collins; State of Georgia, State steamship company, Surgeon Hamilton; Germanic, White Star line, surgeon's name not given; Leipsig, North German Lloyd's line, Surgeon Schlaeger; Lord Clive, American line, surgeon's name not given; Main, North German Lloyd's line, Surgeon Koethe; Malta, Cunard line, surgeon's name not given; State of Nebraska, State steamship company, surgeon's name not given; Ohio, American line, surgeon's name not given; Ontario, Dominion line, surgeon's name not given; Parthia, Cunard line, Surgeon Donovan; Pavonia, Cunard line, Surgeon Tanner; Pennsylvania, American line, Surgeon Raynor; Plantyn, White Cross line, Surgeon Spainlin; Pollux, Royal Netherlands line, Surgeon Garbrett; The Queen, National line, Surgeon Freeland; Strasburg, North German Lloyd's, surgeon unknown; Westphalia, Hamburg-American line, Surgeon Teuser; Wyoming, Guion line, Surgeon Quin.

The most notable line for disregard of vaccinal protection of its passengers is the American, of Philadelphia. In one instance twelve passengers out of fifty by the steamer Pennsylvania, of this line, were found totally unprotected, never having been vaccinated at all. Yet every one had been furnished a steamship protection card. This proportion will hardly hold good throughout, but the number of unprotected by this line is far in excess of any other.

In gratifying contrast to the foregoing exhibit is that made by the surgeons of the following named vessels, many of them belonging to the lines above enumerated, but on which the vaccinal service appears to be thorough, the inspections careful and the vaccinations and revaccinations effective:



Allan line.—Sardinia, name of surgeon illegible on cards presented. Anchor line.—Ethiopia, Surgeon Grade. Cunard line.—Samarina, name of surgeon not given; Serva, Surgeon Brady; Cephalonia, surgeon's name not given. Dominion line.—Dominion, name of surgeon not given. Great Western line.—Gloucester, Surgeon Addensell. Guion line.—Iowa, name of surgeon not given. Hamburg-American line.—Bohemia, Surgeon Kurtz; Gen. Herder, Surgeon Raulenberg; Wieland, Surgeon Hemprich; Frisia, Surgeon Wiesberger; Vandalia, Surgeon Schwindle; Gellert, name of surgeon illegible. Inman line.—City of Chester, Surgeon Irwin; City of Berlin, Surgeon Reynolds; City of Paris, surgeon's name not given. Monarch line.—Grecian Monarch, Surgeon Kirby. National line.—Helvetia, Surgeon Russell; Spain, surgeon's name not given; Egypt, Surgeon Morrison. Netherlands-American line.—Schiedam, Surgeon DeVogel. North German Lloyd's.—Saller, Surgeon Bamberger; Nurnberg, Surgeon Yungberger; Elbe, Surgeon Seharff. Red Star line.—Vaterland, Surgeon Nauroch; Pennland, Surgeon Moore; Belgenland, Surgeon Sterling Erskine; Switzerland, Surgeon Burke; Waesland, Surgeon Barrroughs. Royal Netherlands line.—Surrey, Surgeon Gies; Jason, Surgeon Farlemam. State steamship company.—State of Florida, surgeon's name not given; State of Missouri, surgeon's name not given; State of Indiana, Surgeon Dougall. Stettiner-Lloyd's.—C. H. Schultz, Surgeon Miller. Thingvalla company.—Hekla, Surgeon Siwalt; Island, Surgeon Laker. Trans-Atlantic steamship company.—France, Surgeon Bouchet; Amerique, Surgeon LeRoy; St. Laurent, Surgeon Perin. White Star line.—Baltic, Surgeon Browne.

One inspector notes the difference in passengers arriving by vessels of the same line at Boston and at New York, and attributes the superiority of those arriving at the former port to the character of its inspection service. It is also noted, in this connection, that we had, in Illinois, but one case (a mild varioloid), which could be attributed to Boston, in something over a year.

#### *Vaccination before the Voyage:*

Evidence of the growing interest in this protective measure is found in the increasing numbers of immigrants vaccinated or revaccinated just before sailing. This is especially true of the English and Scotch, and in a great measure offsets the occasional opposition to the inspection, met with from individuals of the same nationalities, and which seems to be due to the anti-vaccinationists of Great Britain.

Vaccination performed at this time, *i. e.*, prior to sailing, has the advantage of enabling the steamship surgeon to judge of its effectiveness during the voyage; and it would be a decided improvement on the present general plan of waiting until the last days of the voyage, if the surgeon would perform the operation as soon after leaving port as practicable. This would give him an opportunity of noting the value of the virus and result of his work, besides facilitating the labor of inspection upon and after arrival. \* \* \*

#### *Vaccination during the Voyage and after Arrival:*

The disparity in the results of vaccination performed on shipboard is due, possibly, as much to the method of performing the operation as to the character of the virus employed, though there is, doubtless, much of this used which has become inert, either from being kept too long or from exposure to the salt moist atmosphere. Both of these evils would be more likely to be remedied if the surgeon was able to follow up the results of his work.

As all doubtful cases in this district, that is, those in which the evidence of proper vaccinal protection is not clear and unmistakable, are carefully vaccinated with virus seldom more than seventy-two hours from the heifer, it is probable that those passing through our hands are more thoroughly protected than many of our own citizens.

#### *Sanitary Supervision before Sailing:*

Recent action in England, detailed in the following, will tend to still further lighten the responsibility of this Service:

Dr. Bloxall, R. N., one of the medical inspectors of the local Government Board, accompanied by Capt. Wilton, representing the Board of Trade, has opened at Liverpool an inquiry with regard to certain sanitary questions connected with emigration, and as to the circumstances in which emigrants passing through the port of Liverpool are placed before sailing. He is likewise instructed to inquire as to the provision made for the isolation and treatment of sick persons arriving from infected places on the Continent or in the United Kingdom; and, further, as to the sanitary arrangements and supervision of the lodging-houses into which emigrants are received, and the means taken with respect to infectious diseases occurring therein.

#### *Immigrants en route:*

In a few instances the cars have been found wet and dirty, especially those transferred from connecting lines; but, as a rule, their sanitary condition is quite satisfactory.

Cholera infantum among children and diarrhoea among adults were quite frequently met with in the early part of the month. One child died en route, of the former disease. Measles and chicken-pox have appeared often enough to keep the inspectors on the alert and to demand the exercise of discretion and prudence in dealing with their subjects. \* \* \*

*Inspections and Vaccinations by the Assistant Inspectors, June 1-September 30, 1882.*

STATIONS.	JUNE-AUGUST.		SEPTEMBER.		JUNE 1-SEPTEMBER 30	
	Number inspected.	Number vaccina'd	Number inspected.	Number vaccina'd	Number inspected.	Number vaccina'd
P., Ft. W. & C. R. R. ....	12,265	1,531	2,560	618	14,825	2,149
L. S. & M. S. R. R. ....	9,223	1,624	2,179	396	11,402	2,020
M. C. R. R. ....	16,292	3,999	2,839	1,006	19,131	5,005
Grand Trunk R. R. ....	7,288	1,687	949	64	8,237	1,751
B. & O. R. R. ....	6,446	1,313	1,747	402	8,193	1,745
Indianapolis ....	7,384	559	3,029	294	10,413	853
St. Louis ....	5,064	181	1,101	138	6,165	319
Totals .....	63,962	10,924	14,404	2,918	78,366	13,842

## FOR THE MONTH ENDED OCTOBER 31, 1882.

Of the immigrants arriving in the district during October, 16,473 were inspected by the assistant inspectors, who found 3,353, or about one-fifth of the whole number, whom they deemed it desirable to vaccinate or revaccinate. Among these were 359 who had never been vaccinated at all, and these included an unusually large number of adults.

It may be observed, in passing, that only those are included among "imperfectly protected or unprotected"—i. e., susceptible to small-pox—in whom the weight of evidence is strongly against the presumption of satisfactory protection. Where there is found reasonable ground for belief that the individual is protected by reason of insusceptibility—as shown, for example, in an unsuccessful attempt at vaccination by a ship's surgeon of approved record, or by an eastern inspector after landing—such a case is included among the "protected." There is, undoubtedly, a certain percentage of error in such judgments; but it is not believed to be large enough to have any practical significance, and the number vaccinated or revaccinated after arrival in the district may be taken as approximately correct figures of the susceptible.

Of the total number (16,473) of immigrants inspected in this district during the month, 4,728, or nearly 30 per cent., were susceptible on landing; but 1,364 of these were vaccinated or revaccinated by eastern inspectors before arriving in the western district. If this proportion holds good with the total number of immigrants arriving in the country, then only a little over one-third of the susceptible are properly protected in the eastern inspection districts. This may be due to the reduction in the number of inspectors at the close of September, but it is also probable that the inspectors pay more attention to the immigrants who settle down in their respective districts, and only vaccinate as many of those going beyond their boundaries as they find time and opportunity for.

*How to Secure General Protection of Immigrants:*

No unprotected immigrant should be allowed to land in this country. Where a port refuses to adopt a regulation excluding such, it is probable that sufficient pressure may be brought to bear upon the steamers, through the railroad companies, to secure the desired end. To do this it would require that State and local boards of health should charge the railroad companies with the expense of vaccination, as well as of the care of the infected brought by them, and of disinfection, etc. If it were understood that such expense, as well as the delay, interference with the movements of trains and other annoyances, could be obviated by securing from the steamers compliance with so obviously reasonable a requirement, it can not be doubted but that the railroad companies have sufficient influence to obtain such compliance. This round-about method of dealing with steamship companies would, of course, be unnecessary, were maritime quarantines based on approved sanitary principles and administered in the interest of the whole country, rather than that of a port or section. In too many instances immigrants are hurried through such ports with only so much of an inspection as apparently serves to protect the port itself from the actual presence of contagious disease.

There would be nothing onerous in the requirement above suggested, for if the steamship companies would unite in refusing to carry unprotected immigrants, intending passengers would secure protection before applying for passage. Failing to do this, the ship's surgeon has usually time and opportunity enough during each voyage in which to examine every passenger and to properly vaccinate those requiring it.\*

\*The former surgeon of an immigrant steamer states that it is the usual custom of steamship surgeons to get a large supply of vaccine virus at one time and use of it till gone, however long. He says they often use virus several months old. Old and inert lymph is furnished by the wholesale druggist at reduced figures. The inspection on ship-board is done hurriedly, and seldom is any pains taken to see all. Not unfrequently the protection cards are given on the word of the immigrant himself, without the doctor taking the trouble to see either the arm or the certificate of vaccination.

*Continued Laxity on Shipboard:*

As the matter now stands, at the end of the fifth month of this Service, there are manifest inequalities in the work, both as to kind and quantity, alike of the steamship surgeons afloat and the inspectors of the Service on shore. Some of the former do not even go through the form of inspecting their passengers; others merely inspect and furnish cards, but without vaccinating; still others vaccinate only unvaccinated children and pay no regard to adults, no matter how remote the date of their original vaccination. Some of the steamship companies which furnish cards to their passengers omit the name of the company, of the steamer and of the surgeon—in short, furnish no clue to their identity.

It has become very obvious that some other measures must be resorted to than those hitherto relied upon to exact honest and effective work from many of the steamship surgeons. In the administration of the Service in this district, it has been studiously endeavored to throw no obstacle in the way of travel. Inspectors have subordinated their hours for sleep and meals to the movements of their various roads, and every effort has been made to discharge the duty with the least possible annoyance or interference.

Many of the evils and difficulties experienced can only be overcome by enforcing the inspections and the necessary precautions without regard to delays and detentions. This will, necessarily, be unpalatable to the railroads, but they can obviate it all by insisting that the steamship companies do their duty in the premises. \* \* \* \* \*

Analysis of an inspector's work, in the Western district, for the month of October, 1882:

Total number of immigrants inspected.....	3, 199
Total number found protected—	
By previous effective vaccination or revaccination.....	1, 604
By previous attack of small-pox.....	36
By effective ship vaccination.....	294
By Eastern inspector's vaccination.....	125
	2, 059
Total vaccinated or revaccinated by Western inspectors.....	1, 140
	3, 199
Total number found to have been vaccinated or revaccinated on shipboard.....	710
Result of ship vaccination—	
Successful.....	189
Modified.....	105
Failure.....	416
	710
Total number vaccinated in Eastern districts.....	125
By New York inspectors.....	8
By Detroit inspectors.....	29
By Port Huron inspectors.....	88
	125
Total number vaccinated in Western district.....	1, 140
Total number revaccinations.....	1, 097
Total number primary vaccinations.....	43
	1, 140

*Small-Pox in transitu:*

Seven cases of small-pox were removed from trains during the month. Of these, five were found on a car of the New York, Pennsylvania and Ohio railroad, in a P., Ft. W. & C. train. Three of them were passengers via steamer Herder, of the Hamburg-American line; had been inspected by Surgeon Raulenberg, Sept. 23, and furnished with protection cards by him, which were countersigned "W. W. S., New York State Board of Health, Oct. 4, 1882."\* These were destined for Grundy county, Illinois, near Braidwood. The other two of these five were landed from the Netherland-American steamer Leerdam, Surgeon Wright, and were bound for Davenport, Iowa. None of these had been revaccinated.

The remaining two were passengers by the steamer Pavonia, of the Cunard line, Surgeon Manners, and the steamship Egypt, of the National line, Surgeon Morrison. These were both adults, and had never been revaccinated. The Pavonia passenger, who was found on a Pennsylvania railroad car, nearing Chicago, stated that the surgeon vaccinated none "who had a visible mark," but that he looked at all the arms. The passenger by the Egypt had been vaccinated when eight years old, but not since—a period of twenty years. This case proved to be hemorrhagic and confluent, and terminated fatally.

The first six cases were removed to the Chicago small-pox hospital, and the remaining one, which was discovered at East St. Louis, on the Indianapolis and St. Louis railroad, was taken to the St. Louis quarantine hospital. The infected cars were side-tracked and thoroughly cleansed and disinfected, and all exposed individuals were at once vaccinated.

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\* It was subsequently ascertained that this endorsement was a forgery. See November report, following.



The following table, compiled from the weekly reports of the inspectors, shows:

In the first column of figures, the total number of immigrants, inspected in the Western district, claiming to have arrived by given steamers.

In the second column, the numbers of such who were found to be perfectly protected by (1) recent successful vaccination or revaccination, either before sailing or on ship-board, or (2) by a previous attack of small-pox.

In the third column, the number of such who were adjudged by the inspectors to have been imperfectly protected on landing, either because the vaccinal scar was defective, or because it was not sufficiently recent, or—in cases of recent vaccination, either on ship-board or after landing—because of failure, probably due to inert virus, or to faulty method of operating, or to interference with the operation by the subject.

And in the last column, the numbers of such who had never been vaccinated or otherwise protected against small-pox.

TABLE

*Showing the Condition of Immigrants on Arrival in this Country, during October, 1882,  
with Reference to their Protection from Small-pox:*

Steamship.	Line.	Surgeon.	No. of Immigrants.			
			Inspected...	Protected....	Imperfectly protected..	Unprotected.
Abyssinia.....	Guion.....	Murray.....	47	22	24	1
Adriatic.....	White Star.....	Murray.....	111	94	12	5
Alaska.....	Guion.....	Grew.....	89	72	16	1
America.....	North German Lloyd.....	Moir.....	625	595	30	.....
Amerique.....	Trans-Atlantic.....	Leroy.....	107	77	30	.....
Amsterdam.....	Netherland American.....	Von Yssel.....	49	25	24	.....
Anchoria.....	Anchor.....	Finley.....	84	59	23	2
Arizona.....	Guion.....	Luttrell.....	198	137	58	3
Australia.....	Carr-Hamburg.....	.....	1	.....	1	.....
Baltic.....	White Star.....	Browne.....	111	93	17	1
Belgenland.....	Red Star.....	.....	44	38	6	.....
Bohemia.....	Hamburg American.....	Kurtz.....	390	297	92	1
Britannic.....	White Star.....	Laughlin.....	95	75	19	1
British Crown.....	American.....	.....	45	32	13	.....
Bolivia.....	Anchor.....	.....	63	29	31	3
Canada.....	Trans-Atlantic.....	Guichard.....	170	146	20	4
Castor.....	Royal Netherland.....	Miltenberg.....	170	96	67	7
Catalonia.....	Cunard.....	Mason.....	84	74	10	.....
Celtic.....	White Star.....	Bateman.....	140	67	64	9
Cephalonia.....	Cunard.....	McCracken.....	224	178	51	15
Cimbria.....	Hamburg American.....	Muller.....	223	114	107	2
Circassia.....	Anchor.....	Foulds.....	35	25	10	.....
City of Berlin.....	Inman.....	.....	17	11	6	.....
City of Brussels.....	Inman.....	.....	41	23	18	.....
City of Chester.....	Inman.....	Irvin.....	372	311	56	5
City of Montreal.....	Inman.....	Bateman.....	235	201	25	9
City of Richmond.....	Inman.....	Clarkson.....	44	37	7	.....
City of Rome.....	Anchor.....	Corder.....	144	118	23	3
Daniel Steinmann.....	White Cross (?).....	.....	44	30	14	.....
Denmark.....	National.....	.....	10	.....	10	.....
Deluyter.....	White Cross.....	.....	12	6	5	1
Devonia.....	Anchor.....	Milner.....	189	164	20	5
Donau.....	North German Lloyd.....	Goernaund.....	374	261	105	8
Deputy de Lome.....	Trans-Atlantic.....	Shourd.....	7	2	4	1
Edam.....	Netherland American.....	Crump.....	7	5	2	.....
Egypt.....	National.....	Morrison.....	197	159	31	7
Elbe.....	North German Lloyd.....	Liedbegener.....	857	677	150	24
England.....	National.....	.....	6	5	1	.....
Erin.....	National.....	Daly.....	107	75	32	.....
Ethiopia.....	Anchor.....	.....	92	67	25	.....
Frisia.....	Hamburg American.....	.....	3	2	1	.....
Geiser.....	Thingvalla.....	.....	333	101	208	24
Gellert.....	Hamburg American.....	Ressfount.....	81	62	19	.....
Germanic.....	White Star.....	Brice.....	548	420	113	15
Hapsburg.....	North German Lloyd.....	Bosch.....	410	344	55	11
Helvetia.....	National.....	Neary.....	107	41	63	3
Herder.....	Hamburg American.....	Raulenberg.....	104	72	30	2



## Condition of Immigrants—Continued.

Steamship.	Line.	Surgeon.	No. of Immigrants.			
			Inspected.	Protected.	Imperfectly Protected.	Unprotected.
Hermann.....	North German Lloyd.....	Walz.....	296	235	59	2
Illinois.....	American.....	.....	160	45	15	.....
India.....	Carr-Hamburg.....	Bender.....	210	159	48	3
Indiana.....	American.....	.....	60	38	22	.....
Island.....	Thingvalla.....	.....	419	192	219	8
Jason.....	Royal Netherland.....	.....	3	2	1	.....
Jan Breydel.....	White Cross.....	Morin.....	31	28	3	.....
Kolu.....	North German Lloyd.....	Decker.....	306	161	145	.....
Labrador.....	Trans-Atlantic.....	Letellier.....	199	124	68	7
Lord Clive.....	American.....	.....	50	14	30	6
Leerdam.....	Netherland American.....	Wright.....	38	26	12	.....
Main.....	North German Lloyd.....	Koethe.....	145	87	55	3
Neckar.....	North German Lloyd.....	Strubel.....	69	54	15	.....
Nederland.....	Red Star.....	Grayson.....	63	47	16	.....
Nurnberg.....	North German Lloyd.....	.....	135	103	30	.....
Oder.....	North German Lloyd.....	Deutes.....	128	89	36	3
Ohio.....	American.....	.....	39	8	21	1
Paris.....	Cie. Com. Francais.....	.....	168	132	31	5
Parisian.....	Allan.....	.....	111	41	70	.....
Parthia.....	Cunard.....	.....	122	96	26	.....
Pavonia.....	Cunard.....	Manners.....	25	19	16	.....
P. Caland.....	Royal Netherland.....	Rhigetti.....	184	142	36	6
Pennland.....	Red Star.....	August.....	154	120	32	12
Pennsylvania.....	American.....	Raynor.....	20	8	12	.....
Pierièr.....	Trans-Atlantic.....	Derricagaix.....	63	47	14	12
Pièr de Coniaek.....	White Cross.....	.....	35	23	10	12
Pollux.....	Royal Netherland.....	.....	18	14	4	.....
Polynesia.....	Carr-Hamburg.....	.....	188	95	92	1
Polynesian.....	Allan.....	.....	103	36	67	.....
Republic.....	White Star.....	Callaghan.....	161	81	75	5
Rhein.....	North German Lloyd.....	Wohlebe.....	251	184	62	5
Rhynland.....	Red Star.....	Stockham.....	137	106	24	7
Saint Laurent.....	Trans-Atlantic.....	.....	54	38	16	.....
Salier.....	North German Lloyd.....	Bamberger.....	1,011	778	206	27
Samarìa.....	Cunard.....	.....	190	178	8	1
Sardinian.....	Allan.....	.....	183	102	81	.....
Sarmatian.....	Allan.....	.....	131	36	95	.....
Scandinavian.....	Allan.....	.....	8	4	4	.....
Seythia.....	Cunard.....	.....	21	13	8	.....
Servia.....	Cunard.....	.....	2	2	.....	.....
Silesia.....	Hamburg American.....	Fisher.....	238	212	26	.....
Spain.....	National.....	Montgomery.....	221	180	38	3
State of Georgia.....	State.....	.....	5	4	1	.....
State of Indiana.....	State.....	.....	17	13	4	.....
State of Nebraska.....	State.....	.....	22	21	1	.....
State of Nevada.....	State.....	.....	30	19	11	.....
State of Pennsylvania.....	State.....	Blake.....	83	27	49	7
Stella.....	Royal Netherland.....	Gutman.....	61	34	23	4
Strassburg.....	North German Lloyd.....	Scharff.....	490	350	132	8
Suevia.....	Hamburg American.....	Hempricht.....	248	222	24	2
Switzerland.....	Red Star (?).....	Bourke.....	152	88	63	1
Thingvalla.....	Thingvalla.....	Lachrisson.....	245	86	148	11
Vandalia.....	Hamburg American.....	.....	4	1	3	.....
Warwick.....	Bristol.....	.....	31	21	7	3
Werder.....	North German Lloyd.....	.....	3	3	.....	.....
Werra.....	North German Lloyd.....	Dombrowski.....	546	371	152	23
Westphalia.....	Hamburg American.....	Teutzler.....	147	105	40	2
Wieland.....	Hamburg American.....	.....	129	92	33	4
Wisconsin.....	Guion.....	Crichton.....	65	24	39	2
Wyoming.....	Guion.....	Barro.....	5	5	.....	.....
Zaandam.....	Netherland American.....	Obdam.....	90	53	37	.....
Zeeland.....	Red Star.....	Lutz.....	235	194	35	6
Totals.....	.....	.....	15,999	11,271	4,378	350

It will be noted, in comparing the totals of this table with the totals of the summary appended to the report, that there are some apparent discrepancies. For example, the total number inspected as given in the summary, is 16,473; in this table it is 15,999—the difference, 474, being made up of arrivals by irregular or unknown steamers. On the other

hand, this table includes 4,723 imperfectly protected or unprotected immigrants, who should, presumably, have been vaccinated in the Western district; whereas the total number of vaccinations and revaccinations reported by the Western inspectors is only 3,353; but this difference, 1,375, is made up of those vaccinated by Eastern inspectors, and of the very few—less than a dozen in all—whom it was deemed inadvisable to submit to the operation.

Study of the table is instructive, in revealing the wide range in the character of the work done by the steamship surgeons. Taking those vessels the figures of which are large enough to generalize from, it is found that the proportion of unprotected, or imperfectly protected, immigrants landed in this country, from given steamers, varies from less than 5 per cent., as in the case of the *America*, of the North German Lloyd line, to over 54 per cent., as in the case of the *Island*, of the Thingvall line. As between vessels of the same line, there is also seen the same disparity heretofore commented on—*ex. gr.*, the *America* above cited, and the *Donau*, both of the North German Lloyd, the former less than 5 per cent., the latter over 30 per cent. of unprotected.

*Observations and Comments of the Assistant Inspectors:*

The following comments of the inspectors will aid to a more intelligent appreciation of the foregoing figures. It should be borne in mind that these are the inspectors' day-to-day observations, no individual one of which may be taken as conclusive evidence of the general character of the passengers of any given vessel—a group from a vessel to-day, for example, may present a very marked contrast to another group from the same vessel met with to-morrow.

Bohemia, Hamburg American Line—Dr. Kurtz, surgeon of the *Bohemia*, had inspected his passengers, and revaccinated many of them with good results.

Ethiopia, Anchor Line—People all found protected by typical or modified vaccination, or previous attack of small-pox.

City of Chester and City of Montreal, Inman Line, and Samaria, Cunard Line—Passengers all bore evidence of good work by ships' surgeons. In one arrival of 195 immigrants by the *City of Chester*, Surgeon Irvin had successfully vaccinated or revaccinated 145, and 35 had been successfully vaccinated before sailing.

India, Carr-Hamburg line—surgeon Bender; 142 passengers—46 recent European vaccinations, 62 ship vaccinations, 32 required revaccination by Western inspector, and 2 unvaccinated adults. There were no adult revaccinations among this number.

Salier, North German Lloyd—Surgeon Bamberger; 510 passengers—500 ship vaccinations, 370 successful, 130 revaccinated by Western inspector.

Koln, North German Lloyd—Surgeon Decker; 306 passengers, 227 ship vaccinations, only 82 successful.

Parisian, Allan line—Could not learn that any inspection had been made by the ship's surgeon, nor were there any evidences of ship's vaccination.

Sarmatian, Allan line—No evidence that surgeon had paid any attention to the matter.

Polynesian, Allan line—Found no trace of vaccination or inspection on shipboard.

Sardinian, Allan line—Nothing had been done on shipboard.

From these four last named steamers there were received 528 immigrants, who were either entirely unprotected or imperfectly protected against small-pox.

Pieter de Coniack, White Cross line—Nearly 30 per cent. of ship's vaccinations were failures.

Cephalonia, Cunard line—Of 156 passengers, 52 were found protected by recent European vaccination, 62 by ship's vaccination, 29 required revaccination, and 13 (adults) had never been vaccinated at all. This surgeon appears to have periods of good and bad work.

Ohio, American line—Surgeon had made no inspection, so far as I could ascertain; gave no cards, and did no revaccinating of adults.

Lord Clive, American line—The surgeon had made no inspection, issued no cards, and did no revaccination.

Canada, Trans-Atlantic Steamship Co.—Surgeon Guichard had inspected his people October 17, but "I found no adults revaccinated by him among those on this train."

Pennsylvania, American line—No adult revaccinations.

British Crown, American line—There had been no examination by the surgeon, no cards had been issued, and no adults had been revaccinated.

Egypt, National line—Dr. Morrison; inspection not very thorough or complete.

Amsterdam, Netherland American line—Surgeon Von Yssel does not appear to have vaccinated the adults. "I vaccinated a child three years of age, upon whom I could find no vaccine cicatrix, and I understood the mother to say that it never had been vaccinated. It had a card from the ship's surgeon, and one from the inspector of New York State Board of Health, both of which I herewith enclose, marked B. H."

Nederland, Red Star line—Surgeon Grayson's inspection of his people, October 4-5, had been thorough. He had revaccinated those adults who needed it. I saw none with typical results.

Rhynland, Red Star line—Dr. Stockham's inspection, September 28, thorough, and good results in his adult revaccinations.

Paris, Compagnie Commerciale Francaise—People had come from Italy; inspection very thorough; adults had been revaccinated.

Baltic, White Star line—Surgeon Browne's inspection a model of thoroughness; adults revaccinated with finely typical results.

Suevia, Hamburg-American line—Surgeon Hemprich's people had been carefully inspected, and those needing it had been revaccinated. Of 13 revaccinations there were found 70 typical results, 41 modified, and 15 failures.

Oder, North German Lloyd—Inspection thorough, and adults revaccinated. "Saw one man, presenting a typical vaccine cicatrix on left arm, done in infancy, and who now had seven typical insertions progressing normally on his right arm. They had been done by puncture of needle apparently, and were, both in respect of numbers and quality, the best that I have ever observed done in that way."

Labrador, Trans-Atlantic Steamship Co.—Surgeon Letellier had examined the arms of his immigrants, and I saw one young woman whom he had revaccinated. "As a rule, I have very rarely found that surgeons of this company ever do any revaccinating. Upon four who claimed to have been revaccinated by very fine puncture, I could find no trace of any operation."

Another inspector reports finding on one train 60 vaccinations by this surgeon, of which 17 were failures, 20 had modified and 23 typical results.

Elbe, North German Lloyd—Surgeon Liedbegener's inspection had been thorough; found none who had not been revaccinated. His method was that of vaccinating by needle, making three to five punctures, thus : . .

Neckar, North German Lloyd—Surgeon Strubel's inspection very thorough; found no adults not revaccinated. His method of vaccination same as above described.

Main, North German Lloyd—Inspection rigid, and numerous excellent adult revaccinations, showing typical results.

City of Rome, Inman line—Inspection good; some of the adults showed typical revaccination by the ship's surgeon.

City of Richmond, Inman line—The surgeon, Dr. Clarkson, had made some very fine typical adult revaccinations.

Hapsburg, North German Lloyd—Dr. Bosch's inspection thorough. The results of adult revaccinations were not so uniformly good as those generally done by surgeons of this line.

Erin, National line—Surgeon Daly's inspections good; some typical adult revaccinations.

Rhein, North German Lloyd—Inspection very thorough, with numerous excellent adult revaccinations. "Found one man from this ship, 46 years of age, who had been revaccinated by the surgeon in three places; the vesicles were typical in every respect, though he had had confluent small-pox."

Gellert, Hamburg-American line—Inspection had been very thorough; all adults seem to have been revaccinated, and the method was good, thus : . . . In regard to the material, many of the insertions promised to become effective; was told they had only been done just before the landing, on or about October 2.

State of Indiana, State Steamship Co.—Surgeon appears to have examined the arms, but found no signs of adult revaccinations.

Germanic, White Star line—Noticed no adult revaccinations.

Herder, Hamburg American line—Surgeon had inspected his people and done a large number of adult revaccinations; the results were generally very poor. "In my judgment, his method was faulty, the insertions were only of the size of the point of a pin."

Perière, Trans-Atlantic Steamship Co.—Inspected on board September 28, by Surgeon Derriegaix. Found not one adult revaccination.

Amsterdam line—Found 71 entirely unvaccinated by steamship surgeon, of which 51 were not suitably protected.

Amerique, Trans-Atlantic Steamship Co.—Surgeon Leroy's people had been inspected; saw no adult revaccinations.

Polynesia, Carr-Hamburg line—Inspections had been, as a rule, thorough; some of the adults had been revaccinated, but results were generally poor; the insertions were made thus : . .—about size of a needle point. "I vaccinated a child six months of age, who had been provided with a card, though it had not been vaccinated."

Arizona, Gulon line—People had been inspected; they said no adults had been revaccinated, so far as they knew, but that the children needing it had been vaccinated.

Westphalia, Hamburg American line—Dr. Teutzier had inspected the people pretty thoroughly, and had revaccinated most of the adults. The results were variable, as though his vaccine material was not equally effective. His method was by latitudinal incisions, thus : . . .

Denmark, National line—Surgeon had made an inspection of his people. "I have no notes of finding any adult revaccinations."

Scythia, Cunard line—People showed typical scars of adult revaccinations by ship's surgeon.

Zeeland, Red Star line—Surgeon Lutz's inspection had been thorough; adults generally revaccinated; results excellent.

Werna, North German Lloyd—Surgeon Dombrowski's inspection had been extremely thorough. He revaccinated all his adults with excellent virus, and had secured a large proportion of typical and modified results.



Donau, North German Lloyd—Surgeon Guernaud's inspection had been thorough. Adults very generally revaccinated; one man, 30 years of age, who had on each arm four typical vaccine cicatrices, had been revaccinated, and showed the operation progressing in a perfectly typical manner. The comments on the steamer Werre apply equally to the Donau.

Thingvalla, Thingvalla line—The immigrants arriving by this line are, as a rule, the most poorly protected of any arriving in the Western district. Of 170 found on one train, Oct. 15, only four had been vaccinated by Surgeon Lachrisson of the Thingvalla, and these were all failures. It was deemed necessary to revaccinate 110 of the 170—five of them being primary.

Pennsylvania, American line—Dr. Raynor had inspected his people and done some adult revaccinations.

"Upwards of two-thirds of the immigrants (Scandinavians) on this train had been landed at Philadelphia from the steamer Illinois, of the American line. After careful inquiry and inspection, assisted by an immigrant who could interpret fluently for me, I came to the conclusion that there had been no inspection whatever, and that no adults had been revaccinated on shipboard. Five of these people came and asked me to vaccinate them."

"I vaccinated a boy, eight months of age, who had a card issued by the surgeon of the steamship Polynesia. Sometimes the cards became interchanged, and it is barely possible that the child had not been inspected at all. I have myself occasionally had to remove a great many bundles from the seat of a car in order to discover a child who had been hidden by its parents to avoid the trouble of getting its arm ready for inspection."

During the week ended Oct. 21 there arrived, via the Baltimore and Ohio Railroad, 115 passengers, landed at Baltimore by the steamers Strassburg and America, of the North German Lloyd. Surgeon Scharff, of the Strassburg, had performed 450 vaccinations, only a very few which were successful. On the other hand, out of 595 vaccinations performed by Dr. Moir, of the America, all but 30 were successful. Of the Strassburg's people it was deemed necessary to revaccinate 179.

Out of 41 passengers in one car, by the steamer Oder, of the North German Lloyd, 40 had been vaccinated on the steamer and only one entirely successfully. Another inspector reports finding three adults who had never been vaccinated, but who presented protection cards from this vessel, bearing Surgeon Deutes' name. According to other passengers, they obtained them on the road.

In another case six immigrants, adults, never vaccinated, presented cards of the steamer Labrador, of the Trans-Atlantic Steamship Company. Surgeon Letellier, also asserted to have been obtained in the same manner as those of the Oder.

In one group of 25 passengers by steamer Castor, Royal Netherland line, Surgeon Miltenberg, there were found six who had never been vaccinated.

"On the 17th of October, I found 12 persons bearing cards from the National line having no date, port of entry or departure, no name of passenger, no name of steamer, and 7 of the 12 had never been vaccinated."

"On the 31st I found a car-load of persons having ship tickets, simply marked *Protected*—no name of line, steamer, port, or passenger, and no date; 7 of the 31 were unprotected, 3 of them never having been vaccinated."

#### *The Immigrant Railway-Service:*

As the weather grows colder and the days shorter, more care is required to keep railroad cars in a cleanly condition, and properly ventilated. The inspectors note from time to time some laxity in this respect, even upon the best managed roads; but the evil seems to be most marked in cars transferred from other lines to our trunk lines. For example, one inspector speaking of a train on the P., Ft. W. & C. R. R., says: "It had two cars of the N. Y., P. & O. R. R., and ninety-three immigrants. It was said that the cars had been brought to Mansfield, Ohio, attached to a freight train, but of this I have no knowledge, personally. The cars were dirty, and water closets had bad odor. The people did not seem to be up to the average lot of immigrants in physical, social or personal condition. I found it necessary to revaccinate forty-one, and to vaccinate three."

Another one says: "Two cars from the Great Western, on one of the trains of the Michigan Central Railroad, presented a marked contrast with the cars of this company used in the immigrant transportation. They were filthy and absolutely without illumination, although they arrived several hours after dark."

In a car on the I., B. & W. R. R., the Indianapolis inspector found the body of a girl, 12 years of age, who had died of diphtheria the day previous. The mother said the child had been sick from the time of landing in New York. The inspector had the body disinfected, and removed in an air-tight coffin; the clothing destroyed; the car emptied, cleansed and disinfected, and the immigrants placed in a clean car and sent on their journey.

The inspector on the Baltimore & Ohio Railroad, on the 21st of October, found a Scandinavian woman who had given birth to a child about two hours before his arrival. She was bleeding profusely, and was almost moribund. He succeeding in arresting the hemorrhage; and, as she was too weak to continue her journey, he had her suitably cared for on arrival in Chicago.

One inspector notes the arrival of a woman by the Cunard steamer Samaria, bound for California, who presented symptoms "suspiciously like those of leprosy."



*Action of the Health Officer of the Port of New York:*

Among the correspondence received during the month, reference is made to the following extract from the remarks of Dr. W. M. Smith, health officer, Port of New York, in which, speaking of certain vessels specified in reports submitted to him, he says: "The records of the surgeons of these ships throw suspicion on their fidelity to the rules they are required to follow. The agents and owners will be notified of the intention of the authorities to detain these vessels at their next entry to this port long enough to examine the work of the surgeons."

If this step be vigorously followed up, it will do much to remedy the evils of which it has been found necessary to complain. The health officers at the various ports of entry have it in their power to reduce the importation of contagious disease to the minimum. That this action of Health Officer Smith is not the rule rather than the exception, is due, probably, to the pressure brought to bear by commercial interests against any measure which involves delay, no matter how essential it may be from a sanitary standpoint. In this work, however, there need be little, if any, delay, if only those interested will comply with the very reasonable requirements which have been so often detailed.

Surgeon Guichard, of the Trans-Atlantic Steamship Co.'s steamer Canada, thinks it would be well to define accurately the expression, "sufficiently protected," adding that the majority of those who bear any evidence of vaccination claim that the operation was recently performed. In response to the doctor's suggestion, the following extract was offered, from a circular recently issued by order of the ILLINOIS STATE BOARD OF HEALTH, concerning the vaccination of school-children in this State:

Scholars \* \* \* \* must present to the teacher (a) certificates of proper vaccinal protection; or (b) certificates that they are protected by previous attacks of small-pox or varioloid; or (c) that they are insusceptible to vaccination; or (d) that their physical condition is such as to make it imprudent to vaccinate at the present time.

*Proper vaccinal protection* means a successful vaccination in a child not yet arrived at the age of puberty; or, if beyond that age, a successful vaccination or revaccination, as the case may be, performed within the past two years (approximately).

The certificates above described must be signed in all cases by legally-qualified physicians.

It is, probably, impracticable for a steamship surgeon to demand the certificate above described; but for all practical purposes he can satisfy himself of the material facts by personal inquisition. In cases of doubt as to the date of a revaccination, or as to insusceptibility, his duty would be to revaccinate.

\* \* \* \* \*  
Appended will be found the usual table showing the number of inspections and of vaccinations by each inspector, for the month of October, and for the total period, June 1 to October 31. For purposes of comparison, the totals for the month of September are also given:

*Inspections and Vaccinations by the Assistant Inspectors, June 1-October 31, 1882.*

Stations.	SEPTEMBER.		OCTOBER.		JUNE 1-OCT. 31.	
	Number inspected.	Number vaccinat'd	Number inspected.	Number vaccinat'd	Number inspected.	Number vaccinat'd
P., Ft. W. & C. R. R.....	2,560	618	2,522	390	17,347	2,559
L. S. & M. S. R. R.....	2,179	396	2,609	265	14,011	2,285
M. C. R. R.....	2,839	1,006	3,199	1,140	22,330	6,145
Grand Trunk R. R.....	949	64	1,119	124	9,356	1,875
B. & O. R. R.....	1,747	402	2,495	603	10,688	2,348
Indianapolis.....	3,029	294	3,333	782	13,746	1,635
St. Louis.....	1,101	138	1,196	49	7,361	368
Totals.....	14,404	2,918	16,473	3,353	94,839	17,195

FOR THE MONTH ENDED NOVEMBER 30, 1882.

An aggregate of 12,592 immigrants arriving in the district were inspected, and 2,915 were vaccinated or revaccinated by the inspectors during the month of October. This is an increase of about three per cent. in the proportion of vaccinations as compared with the preceding month. An examination of the subjoined table shows that this increase is confined to the immigrants arriving by the Pittsburg & Fort Wayne, the Lake Shore, and Michigan Central railways; and is to be accounted for partly by the detection of small-pox on the former road, which led to wholesale vaccination for a few days, and partly by the smaller number of immigrants arriving, whereby more time was given for critical examination and the vaccinal protection of all doubtful cases.

While there is this increase in the aggregate—from twenty per cent. in October to twenty-three per cent. in November—there is a marked reduction in the vaccinations on the Grand Trunk and the Baltimore & Ohio roads. On the former eleven per cent. of all arrivals were deemed to require vaccination or revaccination in October, and less than two per cent. in November; on the latter road it was thought necessary to vaccinate or revaccinate over twenty-five per cent. in October, and only thirteen per cent. in November. On the Grand Trunk road this is fully accounted for by the amount of vaccination performed at Port Huron; while on the Baltimore & Ohio it is due to the increased efficiency of the work performed by the surgeons of steamers arriving at Baltimore, and to the inspections at that port.

#### *Absence of Post-Vaccinal Complications:*

The absence of any serious complications or results attending the vaccinations of these thousands of people in transit, is well worthy of note. Among those coming under observation in this district—aggregating nearly 40,000 vaccinations performed immediately prior to or during the journey—less than a dozen cases of mild erysipelas were reported; there was a remarkable freedom from the "raspberry tumors" or keloid growths, so frequently met with among domestic vaccinations during the previous winter; and the occasional instance of undue inflammation was always clearly attributable to want of cleanliness, or to mechanical irritation caused by neglect of proper protection for the sore. Such a result was hardly anticipated, since both the personnel and habits of immigrants and their surroundings during travel are well calculated to develop those septic conditions which would interfere with the normal and uncomplicated progress of vaccination. These results, in an experience of such proportions, should suffice to overcome any opposition to immigrant vaccination on this ground.

#### *Marked Improvement on Baltimore Vessels:*

There has been a very general improvement in the inspections and vaccinations on board ship since the beginning of this Service, but nowhere has it been so marked as at the port of Baltimore. In an early report (that for the month of July) it was found necessary to say of the work on one of the regular steamers plying between that port and Hamburg: "Very poor; only 11 successful out of 340 vaccinations; result evidently due to want of care on part of steamship surgeon." And of another, belonging to the same line: "Only 13 properly protected out of 410; the vaccination performed on shipboard very unsatisfactory." It was also added that one of these steamers was "known to have been the means of introducing small-pox into five localities in Illinois during the past spring." The following passage concerning the latter of these two vessels, from the inspector's report for November, furnishes a very satisfactory contrast:

November 21. Met an "immigrant special," B. & O. R. R., at noon, at Walkerton Junction, 72 miles from Chicago. Found 367 souls on board who had been landed at Baltimore, Sunday, November 19, from the steamship Hermann, of the North German Lloyd. These passengers had all been vaccinated by the ship's surgeon, except one, who had ample evidence of having had small-pox. Of those vaccinated 27 were progressing with every evidence of typical results. In 96 cases the virus had evidently taken with modified results.

#### *Results of my inspection—*

Protected with typical results of vaccination by ship's surgeon.....	24
Protected with modified results.....	96
Bearing typical cicatrices of previous successful vaccination.....	161
Evidence of insufficient protection.....	75
No evidence of former vaccination, except the failure by ship's surgeon.....	10
Protected by previous attack of small-pox.....	1
Total.....	367

#### *Revaccinated by inspector—*

Those with signs of insufficient protection.....	75
Without signs of ever having been successfully vaccinated.....	10
Total.....	85

The case of small-pox above alluded to is thus reported by the inspector:

"I found on the morning train, November 19, one case of small-pox, in a child (Adolph Peters) four years of age. It came from the steamer Rhyndland, of the Red Star Line, Dr. Stokham, surgeon, landing in New York November 17. The child had been vaccinated in Germany, but presented a very poor mark; was also vaccinated on shipboard, but the result was a total failure.

"This child had been sick for nearly a week, and the disease was apparently in the third day of the eruption. The vesicles were quite numerous on the trunk, the face having but a few. Constitutional symptoms were not marked, and but for the eruption one would not recognize it as a sick child. There were three other small children with the mother, the entire family being bound for Milwaukee. The youngest (18 months) was sick, and evidently had small-pox, but had not reached the stage of eruption. The entire family had been vaccinated and furnished with certificates of protection, but the result of the vaccinations in every case was a failure.

"All of the immigrants on the train had been vaccinated on shipboard, but none presented a successful result. I revaccinated every one very carefully, and had the afflicted family removed to the small-pox hospital and the car disinfected."

#### *Continued Abuse of the Protection Cards:*

Much annoyance has been caused throughout the whole season by the wilful exchange or transfer of the protection cards, and lately—as the pressure of the inspections became

more strenuous—by the forgery of endorsements, probably by emigrant agents or runners. This latter is no doubt the explanation of the card taken up in October by an inspector on the Pittsburg & Ft. Wayne, from an infected passenger by the steamer Herder, and endorsed with the initials "W. W. S., N. Y. S. B. H." In the other case, reported by the same inspector, and in which a genuine ship's protection card from the steamer Amsterdam was presented with a genuine card of the New York State Board of Health, it is probable that both cards—certainly the latter—were fraudulently obtained from the original and rightful possessors.

The facts concerning their presentation, in both cases, were quoted from the inspector's reports in my published report for October, without recognizing the stricture which might possibly be implied upon the methods of the New York State Board of Health and its inspectors.

Such occurrences, as these forgeries, substitutions and transfers, are still liable to happen in the absence of a uniform official protection card, which, it is suggested, should be in the nature of a "descriptive list," embodying, in itself, the data necessary to the ready identification of the rightful possessor.

#### *Gratifying Success of the Inspection Service;*

The same gratifying exemption from imported small-pox, as noted in the last report, continues to obtain in the district embraced by the Service, and in the region westward covered by this district.

Even in Chicago, with its cosmopolitan population and upward of a hundred thousand immigrants either permanently or temporarily sojourning within its limits during the inspection season, the health commissioner, Dr. DeWolf, states that there has not been a single case, among the few that have continued to appear in the city, which could be attributed to newly-arrived immigrants. In other words, all of the recent cases have been either among unprotected residents, or among foreigners who arrived prior to the beginning of the Inspection Service.

With the exception of one immigrant during the month of June in Illinois, and one immigrant family during the month of August in Minnesota, it is not known that a single case of the disease has appeared among this class during the past six months in the entire Northwest. This is the more remarkable when it is considered that the Service has been largely experimental in an entirely new field of sanitary effort, and, like all experiments, must have been more or less imperfect. It is not to be presumed, for example, that all the immigrants entering or passing through the district have been encountered by the inspectors, or that their vaccinations have in every case resulted in perfect protection. But, whatever the lapses and deficiencies, enough has been done to demonstrate that—by the aid of such a service, perfected, as it would be, by being continuously maintained through the immigration season, and coupled with the general and systematic vaccination and revaccination of our native and naturalized populations—this loathsome disease may soon be put in the way of ultimate extinction in the United States.

#### *Inspections and Vaccinations by the Assistant Inspectors, June 1-November 30, 1882.*

STATIONS.	OCTOBER.		NOVEMBER.		JUNE 1-NOVEMBER 30.	
	Number inspected.	Number vaccinated	Number inspected.	Number vaccinated	Number inspected	Number vaccinated
P., Ft. W. & C. R. R.....	2,522	390	2,721	806	20,068	3,345
L. S. & M. S. R. R....	2,609	265	1,771	456	15,782	2,741
M. C. R. R.....	3,199	1,140	2,182	846	24,512	6,991
Grand Trunk R. R.....	1,119	124	654	13	10,010	1,888
B. & O. R. R.....	2,495	603	781	103	11,460	2,451
Indianapolis.....	3,333	782	3,459	603	17,205	2,238
St. Louis.....	1,196	49	1,024	106	8,385	474
Totals.....	16,473	3,353	12,592	2,933	107,431	20,128



## FINAL REPORT AND SUMMARY.

OFFICE OF THE SUPERVISING INSPECTOR, WESTERN DISTRICT,  
SPRINGFIELD, ILL., January 10, 1883.

SIR:—In conformity with the instructions contained in your official letter, suspending the work of the Immigrant-Inspection Service after December 15th, on account of want of funds, the Service was nominally discontinued (as under the supervision of the National Board of Health,) from that date; but, in the hope that appropriations would be promptly made for its continuance, the inspectors, at my request, volunteered to remain on duty up to the close of the month. Occasion is here taken to cordially thank these gentlemen for the interest uniformly evinced in the discharge of their duties, and the efficiency, tact and ability displayed in a service requiring all these qualifications in an unusual degree.

The aggregate of inspections made, and of vaccinations performed, during the month will be found in the appended table, as well, also, as the aggregates of inspections and of vaccinations for the season begun June 1, and ended December 31, 1882. The work for the month developed no new features of interest, beyond the fact that the tempestuous weather of this season of the year increases the difficulty of securing vaccinations on shipboard. As a result a larger proportion of unprotected or imperfectly protected immigrants have been lately met with in this district.

The appended tables embrace the most important results of the work accomplished during the season. From these it will be seen that 47 out of every 100 immigrants, who came within the purview of the inspectors in the Western District, presented evidence of being unprotected or imperfectly protected against small-pox on arrival in this country. There has been a steady improvement in this respect during the whole season, as will be seen by reference to my monthly reports; up to the close of August, for example, the proportion of imperfectly protected and unprotected was 54 per hundred.

The proportion of those vaccinated or revaccinated on shipboard has also risen from 22 in the hundred at that date, to 29 in the hundred for the season; but the proportion of effective vaccinations on shipboard remains substantially the same—being a little under 8 per 100 of the total number inspected in June, July and August, and a fraction over 8 per 100 for the entire season. Of these ship-vaccinations about 4 in every 100 produced modified, and 24 in every 100 produced typical cicatrices; the remaining 72 per cent. were total failures.

The other figures in the tables do not seem to call for further comment.

I am, Sir, very respectfully,

JOHN H. RAUCH, M.D.,  
*Supervising Inspector.*

CHARLES SMART, M.D., U.S.A.,  
*Secretary National Board of Health.*



## IMMIGRANT-INSPECTION SERVICE, N. B. H.—WESTERN DISTRICT.

Inspections and Vaccinations by the Assistant Inspectors, June 1-December 31, 1882.

STATIONS.	NOVEMBER.		DECEMBER.		JUNE 1-DECEMBER 31.	
	Number inspected.	Number vaccinated	Number inspected.	Number vaccinated	Number inspected.	Number vaccinated
P., Ft. W. & C. R. R.....	2,721	806	1,746	478	21,814	3,823
L. S. & M. S. R. R.....	1,771	456	1,240	367	17,022	3,108
M. C. R. R.....	2,182	846	885	365	25,397	7,356
Grand Trunk R. R.....	654	13	398	31	10,408	1,919
B. & O. R. R.....	781	103	476	42	11,945	2,493
Indianapolis.....	3,459	603	2,014	119	19,219	2,357
St. Louis.....	1,024	106	867	88	9,252	562
Totals.....	12,592	2,933	7,626	1,490	115,057	21,618

## TABLES, SHOWING THE RESULTS OF THE INSPECTION OF IMMIGRANTS IN THE WESTERN DISTRICT, JUNE 1-DECEMBER 31, 1882.

Total number of immigrants inspected .....	115,057
Found to have been satisfactorily vaccinated before sailing or during the voyage .....	57,302
Found to have had small-pox .....	3,127
Vaccinated at seaboard quarantines or by intermediate inspectors .....	28,408
Vaccinated in the Western district.....	21,618
Not accounted for—including those deemed inadvisable to vaccinate .....	4,602
	<u>115,057</u>
Total number found to have been vaccinated or revaccinated on ship-board .....	33,414
Results:	
Typical .....	7,963
Modified .....	1,320
Failure.....	24,131
	<u>33,414</u>
Total number of vaccinations performed in the Western District.....	21,618
Primary.....	3,242
Secondary.....	18,376
	<u>21,618</u>



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VACCINATION IN ILLINOIS.

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## VACCINATION OF SCHOOL-CHILDREN.

ALTHOUGH during the four months prior to November, 1881, there had been only twelve new introductions of small-pox into localities in the State outside of Chicago, and these had, in no instance, given rise to any serious or alarming spread of the disease; yet a careful study of the local conditions, and of the progress of the epidemic elsewhere, led to the conclusion that its wide-spread prevalence throughout the State was highly probable. A special meeting of the STATE BOARD OF HEALTH was, therefore, called early in November, and, as previously recited, the situation was thoroughly canvassed.\* Among other matters, evidence was adduced of the existence of a very large percentage of unvaccinated or imperfectly vaccinated school-children, and it was shown that, outside of Cook county, there were less than half a dozen localities where a certificate of vaccinal protection was required from scholars before admission to the school-room. Roughly estimated, from information already acquired, it was believed that fully one-half of the public school-children were unprotected against small-pox by vaccination at the date of this meeting.

The importance of this factor, in a sanitary problem of the character now presented, may be seen by a glance at the figures of population. According to the school census of 1882, the population of the State in that year was 3,331,644, of which number 1,037,567, or over thirty-one per cent., were of the school age, 6—21 years, and of these 713,431 were enrolled scholars. Manifestly, if this large element of the population could be secured against danger of variolous infection, it was imperative that it be done forthwith.

The act constituting the STATE BOARD charges it with "the general supervision of the interests of the health and life of the citizens of the State;" and empowers it with "authority to make such rules and regulations \* \* \* as it may from time to time deem necessary for the preservation or improvement of the public health." In the exercise of this supervision, and believing that a sanitary necessity existed of sufficient gravity to justify the BOARD in fully exercising its authority, the following Order was issued:

\*See *ante*, page 212.

## ILLINOIS STATE BOARD OF HEALTH—NO. 50.

## OFFICIAL ORDER

## CONCERNING THE VACCINATION OF SCHOOL-CHILDREN.

OFFICE OF THE SECRETARY,

SPRINGFIELD, December 1, 1881.

At a special meeting of the STATE BOARD OF HEALTH, held in the city of Chicago, on Tuesday, Nov. 22, 1881, the following resolution was unanimously adopted:

*Resolved, That, by the authority vested in this Board, it is hereby Ordered, that on and after January 1, 1882, no pupil shall be admitted to any public school in this State without presenting satisfactory evidence of proper and successful vaccination.*

OFFICIAL:

JOHN H. RAUCH, M. D., *Secretary.*

THE foregoing Order is issued, in the belief that it is entirely feasible to make small-pox of "as little effect as any extinct epidemic of the Middle Ages;" and that the first, and absolutely necessary, step to this end is to secure the general vaccination of children, so as to prevent the accumulation of unprotected persons as these grow up.

During the past fifteen years, 1867 to 1881, both inclusive, out of an aggregate of 227,113 individual scholars attending the public schools of Chicago, there have occurred only 17 cases of small-pox and varioloid. This immunity is the direct result of a requirement of the Health Department of that city, the enforcement of which was begun in 1867, and by which, evidence of successful vaccination is made a condition precedent to admission to any Chicago public school.

It is, probably, unnecessary to add anything to the testimony of these figures. They are in themselves an unanswerable argument for the value of vaccination. What has been done in Chicago may be done the more readily in smaller towns and villages, in proportion as these latter are less exposed to frequent importation of the disease or to large accessions of unprotected immigrants.

Small-pox is now wide-spread through all the Northern States from the Atlantic to the Pacific, and is daily making its appearance at many new points in our own State. To some extent this is due to the recent enormous immigration; but it is undoubtedly true that the neglect of vaccination among our own people has also much to do with the present alarming disposition to a spread of the disease. This emergency, therefore, seems to offer a favorable opportunity for inaugurating in the State at large a measure which has proved so signally successful in its chief city.

In making vaccination to this extent obligatory, however, the BOARD has duly considered not only the rights but the prejudices of the public on the subject, and the following suggestions and instructions are intended to secure its just rights and to remove existing grounds for honestly-entertained prejudices.

## INSTRUCTIONS.

## AS TO "SATISFACTORY EVIDENCE OF PROPER AND SUCCESSFUL VACCINATION."

The object of this measure is to make sure that children in attendance at the public schools are properly protected against small-pox, to the end that their health and lives may be preserved and interruption of schools by the disease may be avoided.

Evidence of this protection will be most readily and usefully afforded by means of the *Certificate* (Form 51), prepared and furnished by the STATE BOARD. Such certificate, filled out in accordance with the following instructions, will be received as the "satisfactory evidence" required by the Order:

1. Every public scholar under the approximate ages of twelve years if a girl, or fourteen years if a boy—see next paragraph—must present to her or his teacher, on or before the date specified, a certificate signed by a legally-qualified physician, stating (1) *Name*; (2) *Age*; (3) *Residence*; (4) *Date of Vaccination*—as near as may be; (5) *Date of Examination*, accurately; and (7) *Result*, as shown on the child's person.

The *date of examination* and the *result*, as shown on the person of the child, are matters which the physician must testify to of "his own knowledge." All else may be qualified in accordance with the facts—as to information and belief.

2. Children over the approximate ages above given—that is, who have passed through the developmental changes occurring about those ages, and which changes are known to frequently impair the protective power of vaccination performed prior thereto—must pre-

sent certificates showing that they have been vaccinated, or revaccinated, as the case may be, subsequent to those ages. In case, however, a given child has passed the years mentioned and such changes have not yet taken place, *re-vaccination* is not indispensable, provided the evidence of a successful primary vaccination is conclusive. The physician is the sole judge. In each case, and his certificate must convey the necessary information to the teacher.\*

3. A certificate from a legally-qualified physician that a given child is protected by a previous attack of small-pox or varioloid; or that it would be dangerous at the present time to vaccinate a given child; or that such insusceptibility has been demonstrated as, in itself, amounts to protection—shall be accepted by school authorities in lieu of the "satisfactory evidence" required by this Order.

4. All vaccinations should be performed by competent medical men; or, if by a non-professional person of sufficient skill and experience, the result must be examined and certified to by a legally-qualified physician. Such authority only is competent to pronounce upon the sufficiency of vaccinal protection, or upon the danger or inadvisability of performing the operation at a given time, or in certain conditions of the system.

5. In case of failure in a primary vaccination, the attempt should be repeated often enough (at intervals of a fortnight) to demonstrate the insusceptibility of the child. Five repetitions are not too many, and it not unfrequently happens that the seventh, eighth or ninth attempt is successful. Where less than five repetitions are advised by the physician, he must assume the responsibility of asserting the proper protection of the child. His endorsement of the certificate to that effect shall be received by the school authorities as entitling the child to school attendance.

6. If more than one in five primary vaccinations are failures, the physician should suspect the quality of his virus, and obtain a supply from a new source. With most physicians it is undoubtedly unnecessary to urge the importance of examination at a proper interval after the operation. Such examination should be always made, because, among other reasons, without it the vaccinator deprives himself of the only proof of the value of the virus employed, and his vaccinees may thence be reposing in a false security, which may prove disastrous.

7. To facilitate the tabulation of returns, and their subsequent examination in the Secretary's office, the use of the following terms, to describe the result, is desired: *Typical*, if the resulting scar is well-marked, characteristic, of normal size, and perfect in outline, depression and pitting; or *Modified*, if, while well-marked and characteristic, the scar is less than normal size and of irregular contour; or *Bad*, if the scar be less than one-fourth of an inch in diameter, or simply a smooth, flat, shiny mark.

The physician should always insist upon revaccination where the scar is "Bad," as thus defined.

8. Legally-qualified physicians may obtain the *Scholar's Certificate* blanks from teachers, school directors or other officers of public instruction; from county clerks; or, by mail, direct from the Secretary's office, at Springfield.

#### TO SCHOOL AUTHORITIES.

I. The execution of this Order is necessarily devolved upon the various officers of public instruction—county superintendents, school directors, trustees and teachers—each and all of whom are hereby authorized and directed to aid in its enforcement in their respective capacities. In all cases, however, the assistance and coöperation of the local health authorities should be invited.

Much of the success of this effort to protect the children from a loathsome pestilence will depend upon the wisdom, firmness and intelligent action of the school authorities. Timely notification and instruction will save much unnecessary friction; and exact information will soon dispel ignorant and bigoted opposition. It only needs that the public be rightly informed to secure ready coöperation. All inquiries will be promptly answered from this office, and every available facility afforded for meeting emergencies. It is not desired, except as a last resort, to arbitrarily enforce this measure; at the same time it should be clearly understood that it will be enforced.

II. County superintendents are respectfully requested to secure a prompt distribution of the copies of the orders, certificates, returns, etc., forwarded to them; to explain to directors and teachers the scope of the Order, and to advise as to the methods of its enforcement. It is especially desired that they communicate fully and promptly to the Secretary's office any difficulties encountered, and suggestions which their individual knowledge of local conditions and circumstances may warrant.

III. School directors are the immediate source of authority for the action of teachers under this Order. The Attorney-General says that the law which directs all officers and employees of the State to enforce the rules and regulations of the STATE BOARD OF HEALTH, unquestionably includes school directors. He adds: "In enforcing the orders of the BOARD OF HEALTH, of course the law will protect them (the school directors) in using any necessary means to carry out the orders, even to the extent, should it become necessary, of excluding from the schools those who refuse to comply." Instructions to this effect should, therefore, be given to the teachers by their directors.

Provision should be made by School Boards for the gratuitous vaccination of the children of those unable to pay for the same. Local boards of health have the right to do this at the expense of the town, county or city funds. Where there are no regularly organized boards of health the county commissioners act in that capacity, or the super-

\*The minimum ages here given were chosen advisedly, for the purpose of securing as many revaccinations as possible.



visors, assessors and town clerks of townships. These officers have all the power, authority and responsibility of a board of health, and will generally be found quite willing to assist in this method of protecting the public health.

IV. Teachers—who should, in all cases, be vaccinated or revaccinated at the present time—should familiarize themselves with the *Scholar's Certificate*; see that it is properly filled out when presented; make a record of its data for their own use; fill up the blank return (Form 52, S. B. H.) and forward said return, in its accompanying envelope, to the Secretary's office, in Springfield, as herein directed.

In the examination of the *Certificate*—

1.—Special attention must be paid to the entries in "4. Date of Vaccination;" "6. Date of Examination;" and "8. Previously Vaccinated."

Any *certificate* relating to a *recent* vaccination—that is, one performed within the past twelve months—must show the date of such vaccination and the date of examination; and an interval of not less than *eight days* must be shown between the two dates.

Any *certificate* relating to a *previous* vaccination only—that is, one performed prior to January 1, 1881—must state the year of such vaccination, and the date of examination, which examination must have been made since December 1, 1881.

Any such *certificate* not conforming to one or the other of these requirements is imperfect, and must be returned to the certifying physician for completion. This is essential in order to be assured that the child has been *recently examined*, and that the record concerning its vaccination is matter of knowledge, and not of presumption or opinion.

2.—A *certificate* of recent vaccination issued by a legally-qualified physician, and in which the result has been a failure, shall be received as a substantial compliance with the Order, *entitling the child to admission pending the result of the repeated operation*. Similarly, a *certificate* of a legally-qualified physician setting forth that the bearer is protected by reason of a previous attack of small-pox or varioloid; or that it would be dangerous to vaccinate the bearer at the present time, shall be valid as entitling such child to admission to school.

3.—*Certificates* of successful vaccination, or revaccination; or of protection by previous attack of small-pox or varioloid; or that it is dangerous to vaccinate, will, after the data have been entered on Form 52, be returned to the children, and shall be valid, as entitling to admission, until otherwise ordered.

*Certificates* in which the result is entered "failure," will be taken up on presentation and forwarded with the Returns.

[The final paragraph of this circular refers to the mode and time of making the Vaccination Returns (Form 52).]

This action of the BOARD met with a cordial and efficient support from the State Superintendent of Public Instruction, who furnished the following letter, which was appended to the circular given above:

*To County Superintendents of Schools, School Boards and Teachers:*

THE STATE BOARD OF HEALTH, for the purpose of restricting the spread of the small-pox and of depriving the disease of its most serious effects, has, in the exercise of authority given by the act creating the BOARD, passed the Order recited above, relative to the vaccination of the pupils of the public schools; and county superintendents are asked by the BOARD to assist in distributing to the districts the circulars and blanks sent them; school boards are instructed to enforce the Order in the schools in their charge, and teachers to inspect certificates of vaccination presented by their pupils, to make a record of them for their use, and a return of the same to the Secretary of the BOARD in this city, in the way and at the times indicated.

I need not say that the BOARD has in view, in making this Order, an end, whose accomplishment is of great concern to the whole community. Neither need I say to you, who have so often known of schools discontinued for several weeks, or broken up for a term, by the presence of small-pox in the vicinity, that the purpose of the BOARD has an intimate connection with the welfare of our schools.

I bespeak, therefore, for the BOARD your cordial and faithful coöperation in carrying out its plans according to the instructions given.

JAMES P. SLADE,

*State Superintendent of Public Instruction.*

It was not to be expected that a measure so radical and so sweeping as the School-Vaccination Order could be enforced without some friction and opposition, and an immense amount of labor. This was the first exercise of authority in sanitary matters, on any large scale, which the BOARD had ever been called upon to attempt. It is true that during the yellow-fever epidemics of 1878 and 1879 orders had been issued and quarantine restrictions imposed; but this only in a



comparatively small area, and affecting only a few individuals, relatively. Then, too, there was, in these instances, the important moral support begotten of the fears aroused by the immediate presence of the disease.

But, at the time when the School-Vaccination Order was issued, small-pox had invaded only a few localities, and those mainly in the vicinity of, or in close connection with, Chicago. In the State generally, and to the large majority of the population, the horrors of a small-pox epidemic were unknown as matters of actual experience. To very many persons the Order seemed an unnecessary interference, and the members of the BOARD were looked upon as alarmists.

On the whole, however, the criticisms and opposition were less than had been anticipated; and the amount of protective work (vaccination and revaccination) accomplished during December and the early part of January was so reassuring; while the difficulties caused by unfavorable weather, bad roads and inadequate supplies of virus were so great, that it was deemed safe and advisable to extend the time for making the returns from the schools, and for the strict enforcement of the Order, from January 1st to January 25th.

Circular No. 22, from the Department of Public Instruction, under date January 21, indicates some of the difficulties encountered and questions which had arisen up to this time:

*To School Boards and Teachers:*

The recent Order of the STATE BOARD OF HEALTH, concerning the vaccination of children attending the public schools, has given rise to many questions regarding the duties imposed by it upon school boards and teachers; and, since it is impossible to answer these inquiries, fully, in any other way, I have prepared this circular, to which your attention is respectfully called.

POWERS OF THE BOARD OF HEALTH.

"SEC. 2. The STATE BOARD OF HEALTH shall have the general supervision of the interests of the health and life of the citizens of the State. They shall have charge of all matters pertaining to quarantine; and shall have authority to make such rules and regulations, and such sanitary investigations as they may, from time to time, deem necessary for the preservation or improvement of the public health; and it shall be the duty of all police officers, sheriffs, constables, and all other officers and employes of the State, to enforce such rules and regulations, so far as the efficiency and success of the BOARD may depend upon their official cooperation." (Rev. Stat. Ill., Chap. 126 a.)

OPINION OF THE ATTORNEY GENERAL.

"Under this section, broad duties devolve upon the BOARD OF HEALTH, and ample power is given to enable them to discharge such duties. They not only have the right, but it is their duty to make any and all rules and regulations which they may deem necessary to preserve the public health. Such rules and regulations, when promulgated, have the force and authority of law, and are to be enforced, if necessary, by the entire power, including school officers, etc., of the State."

EXPENSES OF VACCINATION.

"Local boards of health may incur expenses for vaccination of those who are unable to pay for the same, when, in their judgment, it is necessary to prevent the spread of disease and for the general health of the public, and may incur such other expenditures as to them, in the exercise of a sound discretion, may seem prudent and necessary, either to effect a cure or prevent the spread of any epidemic or contagious disease. The expenses so incurred should be paid out of the general fund of the municipal body represented by the board of health incurring the expense, as the town, county or city." [Extract from opinion of Attorney General, given STATE BOARD OF HEALTH Dec. 31, 1882.]

ORDER OF THE BOARD OF HEALTH.

In the exercise of its power the STATE BOARD OF HEALTH issued the following Order, which was directed and distributed to school authorities, last month

*Resolved*, That by the authority vested in this BOARD, it is hereby ordered, that on and after January 1, 1882, no pupil shall be admitted to any public school in this State without presenting satisfactory evidence of proper and successful vaccination.

OFFICIAL:

JOHN H. RAUCH, M. D., *Secretary*.

#### FURTHER ACTION OF THE BOARD.

At a meeting of the BOARD, held in this city on the 19th inst.,\* it was—

*Resolved*, That the action of the Secretary in extending the period for the enforcement of the vaccination order of the BOARD, from January 1st to the 25th, is approved, and he is hereby authorized to still further extend the period in such cases as in his judgment he may deem necessary.

And the following, offered by Dr. Newton Bateman, was adopted:—

*Resolved*, That the power of the STATE BOARD OF HEALTH, under the law creating said BOARD, to order the vaccination of all public school children, is clear and unquestionable. The consequent duty of Boards of School Directors to see that that Order is strictly enforced in their respective districts, is equally clear, and the said Order of the BOARD OF HEALTH is their sufficient authority for so doing.

Should any Board of Directors refuse or neglect to carry out said Order, they may be proceeded against for neglect of duty; and should any such Board be prosecuted for enforcing said order, they may, if necessary, employ counsel to defend them in such suit, and pay said counsel out of any school funds in their district not otherwise specifically appropriated.

The protection of the public health from the loathsome and deadly scourge of small-pox, is a paramount obligation, and nothing can or should or will excuse school boards or other officers or persons concerned, from doing their whole duty in the premises.

OFFICIAL:

JOHN H. RAUCH, *Secretary*.

#### AUTHORITY OF SCHOOL BOARDS.

To-day I have received the following letter from the Attorney-General, upon the powers of school boards under these orders of the BOARD OF HEALTH:

STATE OF ILLINOIS, ATTORNEY-GENERAL'S OFFICE,

*Springfield, January 21, 1882.*

HON. JAMES P. SLADE,

*Superintendent Public Instruction,*

DEAR SIR:

In answer to your question as to the authority of school directors to enforce the rules of the STATE BOARD OF HEALTH in reference to vaccination, I have the honor to say that section 2 of the act creating the STATE BOARD OF HEALTH, declares, that, "it shall be the duty of all police officers, sheriffs, constables, and all other officers and employes of the State, to enforce such rules and regulations, so far as the efficiency and success of the BOARD may depend upon their official co-operation." These are the words of the law, and it includes school directors with all other officers. In enforcing the orders of the BOARD OF HEALTH, of course the law will protect them in using any necessary means to carry out the orders, even to the extent, should it become necessary, of excluding from the school those who refuse to comply.

Very truly yours,

JAMES MCCARTNEY,

*Attorney-General.*

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\* See Abstract of the Proceedings of the ILLINOIS STATE BOARD OF HEALTH, at its Meetings during the year 1882, pages iii-iv.

## DUTIES OF TEACHERS.

Primarily, the duty of executing this Order devolves upon school boards, and teachers must follow their directions. But teachers should give their hearty support and cordial cooperation. Upon them, too, is imposed the important duty of making a careful inspection of certificates and accurate returns to the Secretary of the BOARD OF HEALTH. This work is essential to the success of the efforts made to stay the progress of the disease; for only by being fully informed of what has been done, can the STATE BOARD direct intelligently its further action.

In conclusion, I will only add that, if the Order seemed advisable last month, when small-pox was prevalent in but a few places in the State, there can be no doubt of its necessity to-day, when it is known from trustworthy sources of information that the disease exists in forty-two counties. The evidence is overwhelming that successful vaccination is, with scarcely an exception, a complete protection against the foul and dreadful disease; and it is believed that if the Order of the BOARD is faithfully executed, there will be no need of closing any of our schools from fear of small-pox.

Dr. Ranch, Secretary of the BOARD, in answer to inquiries from places where small-pox has appeared, says: "If school boards will rigidly exclude from the school-room every person—child or adult—not vaccinated, as required by the instructions of the BOARD OF HEALTH, they may dismiss all apprehensions, so far as the schools are concerned,—except, perhaps, in cases where the disease has become epidemic before precautionary measures have been enforced."

If further supplies are needed, or instructions as to details, or if in any district there are special difficulties in the way of vaccination, you should correspond with the Secretary of the BOARD OF HEALTH.

JAMES P. SLADF,

*State Superintendent of Public Instruction.*

Since the above was given to the printer, the Secretary of the STATE BOARD OF HEALTH has issued a further Order, given below.

J. P. S.

(Official Order No. 55.)

## ILLINOIS STATE BOARD OF HEALTH,

OFFICE OF THE SECRETARY,

*Springfield, January 23, 1882.*

WHEREAS, Representations made to the STATE BOARD, of the difficulties encountered in attempting to comply with the Order concerning the vaccination of school-children by the time specified, indicate the necessity for a further extension of the period; it is, therefore, hereby

*Ordered*, That, in counties where small-pox now exists, the time is extended to February 15, prox.

In counties as yet free from small-pox the time is extended to March 1, prox.

In counties now free from the disease, but in which small-pox hereafter makes its appearance, the Order shall be enforced within fifteen (15) days from the date of the first case.

Returns of certificates (Form 52, S. B. H.) may be made at any time prior to March 3, prox.

By order of the BOARD:

JOHN H. RAUCH, M. D., *Secretary.*

Up to this time, namely, January 23, there had been prepared, printed and distributed to 11,529 school districts, over 600,000 copies of the necessary circulars, certificates, blank returns, etc.—the first issue of vaccination certificates being intended to supply the entire average scholarship attendance, over 450,000 children.

In February a further issue of 150,000 certificates, together with the necessary number of blanks for returns, was made, in response to the requests of County Superintendents and School Boards. In all, during the year 1882, there were furnished nearly one million copies of printed matter concerning the suppression of small-pox. Meanwhile 11,720 sheets of returns had been received and examined; over 4,600 letters and postal cards were written, and upward of 9,000 correction blanks (pertaining to the Vaccination Returns) were filled out and forwarded to teachers making returns, either directly or through School Directors, County Superintendents or other officers.

The last circular on the subject was issued in September, and is as follows:

## ILLINOIS STATE BOARD OF HEALTH.

## OFFICE OF THE SECRETARY,

SPRINGFIELD, September 20, 1882.

*To the County Superintendents, School Boards and Teachers:*

Communications received since the beginning of the present school year, indicate the necessity for renewed instructions concerning the School-Vaccination Order of the STATE BOARD OF HEALTH, promulgated in December, 1881.

The Order has been complied with to a very gratifying extent. Its wisdom and utility have been demonstrated by the facts—

*First*.—That among the hundreds of cases of small-pox which have occurred in the State since the Order was issued, not one is reported of a public scholar who had been properly or recently vaccinated. Several cases, however, with a large proportion of deaths, have occurred among scholars who had either not been vaccinated at all, or not since infancy.

*Second*.—That in no instance where the Order was carried out has it been necessary to close the public schools, even when small-pox existed in a community. On the other hand, schools have been broken up and studies interrupted in a number of instances where—as shown by the returns in this office—the Order had been neglected.

In some of these cases the failure to enforce the Order was due to causes which no longer exist. The present is a very favorable season of the year in which to vaccinate. Good vaccine matter can be readily procured, and the operation is not now liable to be complicated by the results which obtain in cold and changeable weather.

Concerning the statements sometimes met with—of serious results from vaccination, loss of arms and even death—the Secretary takes occasion to say that he has made it his personal duty to investigate every report of the kind which has come to his knowledge. The net result of such investigations is that not one such report has been substantiated. He has been wholly unable to find any evidence of a death caused by vaccination, in this State, or even of permanent injury or serious illness, due to the operation alone. He does know, however, of hundreds of deaths—aside from the suffering, the loss of sight and hearing, and the disfigured faces among survivors—caused by the neglect of vaccination.

THERE have been probably 2,000,000 persons vaccinated in the State of Illinois during the past eighteen months, and precisely in the ratio of such vaccinations in any given community is the assurance of freedom from interruption of the public schools, and immunity from danger of outbreaks of small-pox during the coming winter. Wherever a community includes any considerable number of unprotected persons there is, not merely a liability, but an almost absolute certainty of trouble during the approaching cold weather, since the infection will inevitably find its way into the State again from other infected localities during the winter. Recent outbreaks in some of the river counties clearly foreshadow this result, and these outbreaks will be much more serious than now, when doors and windows are kept open and free ventilation and atmospheric disinfection may be secured. The indications are that the winter of 1882-3 will be a severe one, and such winters are, on the one hand, unfavorable to vaccination, while on the other, their conditions favor the propagation and spread of small-pox contagion.

AN examination of the reports thus far received shows that more than one-half of the total school population of Illinois, was unprotected against small-pox on the 1st of December, 1881.

Of the two million vaccinations within the past eighteen months, over thirteen hundred thousand have been performed since the first of January, 1882, as the result mainly of this Vaccination Order, and of similar measures instituted by the State and local Boards of Health. Until these measures were fairly under way there was a steady increase of the small-pox—but coincidently with their successful operation came a decline of the disease, until now it is practically at an end in Illinois.

It remains now to perfect and perpetuate the results thus far accomplished, and to this end—so far as the public schools are concerned—the following instructions are issued with reference to the School-Vaccination Order:

1. The Order is permanent and continuous. At the beginning of the school year teachers must satisfy themselves of the vaccinal status of each of their scholars. This will be done in the case of scholars who were in attendance during the last term, by an examination of the vaccinal record required to be kept by the teachers, or by an examination of the scholars' certificates. Scholars whose records are imperfect, as well as all new pupils, must present to the teacher (a) certificates of proper vaccinal protection; or (b) certificates that they are protected by previous attacks of small-pox or varioloid; or (c) that they are insusceptible to vaccination; or (d) that their physical condition is such as to make imprudent to vaccinate at the present time.



*Proper vaccinal protection* means a successful vaccination in a child not yet arrived at the age of puberty; or, if beyond that age, a successful vaccination or re-vaccination, as the case may be, performed within the past two years (approximately.)

The certificates above described must be signed in all cases by legally-qualified physicians.

2. Certificates must be returned to the scholars after the teacher has made the entries necessary to fill out the *Vaccination Return* (Form 52) to the STATE BOARD OF HEALTH. The certificates must not be sent to this office.

It is recommended that each teacher be provided with a book—*Vaccination Record*—in which to keep a permanent record of the vaccinal history of the scholars.

3. *Vaccination Returns* (Form 52) accounting for every child whose name appears on the School Schedule, must be forwarded to this office at the end of the *second* month of the school year.\* The name of the child only need be given on this *Return*—provided *all* the data concerning it have been given on a previous *Return*. In such cases the words *Previously reported* should follow the child's name. If the child's record was imperfect on the previous *Return*, all the data now on hand should be given, as well as all data pertaining to new pupils.

Supplemental *Returns* must be made at the end of each term, embracing all new pupils and the perfected records of those previously returned imperfectly.

4. Copies of *Vaccination Certificates* (Form 51) and of the *Vaccination Returns* (Form 52), will be furnished on application to the Secretary. Copies of the Order may also be obtained.

In some localities the vaccination of school children had been enforced before the receipt of the certificates and blanks prepared by the BOARD. From some of these no reports have yet been received. As it is desired to ascertain the condition of the entire school population with reference to this question, teachers, superintendents and other school officers cognizant of the facts are respectfully requested to inform the Secretary as to (1) the total number of scholars in any such locality; (2) the total number properly protected against small-pox; (3) the total number vaccinated or revaccinated within the past two years. Copies of the certificates in use, as well as of circulars, notices, etc., which have been issued, are also desired.

It is suggested that school boards might materially facilitate the enforcement of this measure, by embodying its purport in the form of one of their own regulations. They have the necessary power and authority to do this, and in the numerous instances where such a course has been pursued, it has worked very successfully. The STATE BOARD would prefer this, because, for one among other reasons, the school boards are in more intimate relation with the teachers and scholars.

It is hardly necessary to again state that every teacher should comply with this requirement as fully as any scholar. School boards are authorized to demand that each teacher employed shall present evidence of proper protection against the liability of conveying contagion into the midst of his or her pupils.

The thanks of the STATE BOARD are tendered to the county superintendents, school boards and teachers generally, for the cordial support and cooperation they have accorded to this effort. It is largely due to them that the school population of Illinois is, undoubtedly, better protected against small-pox than that of any State in the Union of the same age, and is probably not excelled in this respect by any of the older Commonwealths.

By order of the BOARD:

JOHN H. RAUCH, M. D., *Secretary*.

*County Superintendents may obtain additional copies of this circular, if necessary, by addressing the Secretary. Its prompt and general distribution is respectfully urged.*

Appended are copies of the Scholar's Certificate of Vaccination, Return of Vaccination Certificates, Circular Letters to County Superintendents and to County Clerks, and of the Correction Blank for teachers making Returns.

Concerning the form of the Certificate, it is to be observed that this was adopted advisedly and after mature deliberation. While Sanitary Superintendent of the city of Chicago, and engaged in securing the vaccinal protection of the public school children of that city,<sup>†</sup> the Secretary's attention was frequently attracted to the loose and perfunctory manner in which certificates of vaccination were furnished. Very often the performance of the operation and the filling out of the certificate were completed at one and the same time. By this practice the physician, on the one hand, deprived himself of the best means of judging of the value of the virus he was using;

\* This modification of the original Order, which required *Returns* to be forwarded at the end of the *first* month, is made in order to give teachers more time to perfect the *Returns*.

† See page 370.

while, on the other hand, the child might falsely believe itself to be properly protected, simply because it had been "cut for the cow-pox," and had a sore arm in consequence.

A still less excusable practice, and one which obtained to no inconsiderable extent, was the furnishing of certificates by physicians without examination, but simply on the mere statement of parents that their children had been vaccinated. Even if this were the case—if the child had really been vaccinated—no physician would be justified in certifying to its vaccinal protection without a personal inspection of the cicatrix. But too often the certificate was only obtained for the purpose of securing the child's admission to school, and was totally valueless as evidence of the vaccinal status of the individual.

Influenced by these considerations, it was deemed best to prepare a form of certificate in which the record of details should be, in itself, intrinsic evidence that it had been furnished in good faith, and that it truly set forth the child's vaccinal history. Subsequent events have amply justified this decision, and the vast amount of data herein tabulated for study and deduction, and which could hardly have been accumulated in any other way, is to some extent at least, compensation for the labor involved in the filling out of the hundreds of thousands of these certificates.

#### SCHOLAR'S CERTIFICATE OF VACCINATION.

ILLINOIS STATE BOARD OF HEALTH.—No. 51.

- |   |                                       |
|---|---------------------------------------|
| 1. Scholar's {<br>Name: { .....                       | 2. Age: { Y'rs   Mo's<br>.....        |
| 3. Residence:.....                                    | 4. Date of Vaccination: { ..... 188.. |
| 5. Virus: { Bovine.<br>{ Humanized.                   | 6. Date of Examination. { ..... 188.. |
| 7. Result:.....                                       |                                       |
| 8. Previously {<br>Vaccinated: { In the year 188..... | 9. Result:.....                       |

I HEREBY CERTIFY that the foregoing statements are true, of my own knowledge, and that the child named has been vaccinated, with the result above set forth.

....., M. D.

[The certifying physician should read Circular No. 50, S. B. H., for full information concerning this certificate.]

ILLINOIS STATE BOARD OF HEALTH.—FORM No. 52.

#### RETURN OF VACCINATION CERTIFICATES.

- 1.—From the Principal of the common school at ....., in district number ....., township number ....., range number ..... of the ..... principal meridian, in the county of ....., in the State of Illinois.
- 2.—From the Principal of the ..... school, in the city of ....., county of ....., State of Illinois.

#### EXPLANATIONS.

1. In the country schools use the first heading; in city schools use the second heading. The principal of a *graded school* may make out the Return for the whole school. Use the common designations of the schools in towns or cities, *Dearborn, Third Ward, Front Street*, etc.

2. Where the Christian name of the scholar is not distinctively masculine or feminine use the small letter *m* or *f* to denote the sex.

3. Names of months may be indicated by figures, thus: *December* 31, 1881, may be written 12 | 31 | '81; *January* 1, 1882, may be written 1 | 1 | '82.

4. Designate the kind of Virus used, by a check (✓) in the proper column "B." for *bovine*, "H." for *humanized*.

5. Designate the character of the scar, in the columns "Result," by a check (✓) or cross (X), under the appropriate initial—*T.* for "typical," *M.* for "modified," *B.* for "bad." Write the word *Failure* across these three columns where that is the result.

6. This return should be completed and mailed to the Secretary's office promptly on the first of February, 1882.

7. Additional blanks of this Form may be obtained by addressing the Secretary STATE BOARD OF HEALTH, Springfield, Ill.

NAME.	AGE.		DATE OF VACCINAT'N.	Virus.		RESULT.			Previous vaccination Year	RESULT.		
	Years.	Months.		B.	H.	T.	M.	B.		T.	M.	B.
(Space for 50 names.)												

I certify that the foregoing is a correct abstract of the data contained in the Certificates of Vaccination presented by the scholars in attendance at this school during the month of ———, 188 ; that the names given correspond with those on the Register and Schedule of this school for the past month; and that no scholar has been admitted, or is now in attendance, who has not complied with the current Order of the ILLINOIS STATE BOARD OF HEALTH relative to the vaccination of school children.

....., Principal.  
..... P. O. Address.....

These blanks can be used for Supplemental Returns, by striking out inappropriate works referring to the period covered, and writing in the necessary changes.

## TO THE COUNTY SUPERINTENDENT OF SCHOOLS:

.....County, Ill.

There are herewith furnished you for distribution—

..... copies of the *Vaccination Order*;  
..... copies of *Scholars' Certificate of Vaccination*;  
..... copies of the *Return Vaccination of Certificates*;  
..... addressed *Envelopes*.

It is intended to supply *one* copy of the *Order* to each School Board, *one* to each school, and the remainder are for the use of physicians.

*Vaccination Certificates* are furnished for ..... per cent. of the total number of enrolled scholars in your county.

Of the *Returns*, there are sufficient to supply *two* copies to each ungraded school, and *three* copies for every one hundred enrolled scholars in the graded schools. *Envelopes* in proportion.

If there is any shortage in the package you receive, please notify this office, and it will at once be made good.

It is hoped the distribution may be effected with as little delay as possible, and that you will kindly co-operate with the Board in this effort.

Any suggestions will be gladly received, and inquiries promptly answered.

JOHN H. RAUCH, M. D.,  
Secretary State Board of Health,  
SPRINGFIELD, ILL.

NOTE—It is especially desired that the *Return of Vaccination Certificates* be forwarded to this office promptly on ———, 1882.

The blanks for the *Supplemental Returns*, spoken of on page 3, *Vaccination Order*, will be furnished in due season.

☛ If there has been any recent change, please deliver to your successor.

## ILLINOIS STATE BOARD OF HEALTH,

## OFFICE OF THE SECRETARY,

Springfield, January 16, 1882.

DEAR SIR:\*

I have sent you, by express, an additional supply of *Official Orders* of this BOARD concerning the Vaccination of School-children, (S. B. H.—50A) and the Prevention of Small-Pox, (S. B. H.—53.)

It is the duty of all good citizens to aid in the enforcement of these measures—intended not only to preserve the public health, but to avert interruption of business, loss of trade, closure of schools, and kindred evils, which an outbreak of small-pox always entails.

In your county the .....  
are, *ex officio*, the legal health authorities for all localities in the county where there are  
no regularly organized boards of health. You are respectfully requested to distribute  
copies of Order No. 53 to these officials, as well as to the regular board of health; and to  
give them such other information and assistance as you may be able.

It is hoped you will, also, aid the school authorities with reference to the enforcement  
of Order No. 50A.

Please read the Orders carefully, and write this office if you need any further information.  
Any suggestions will be gladly received, and inquiries promptly answered.

Very respectfully,

JOHN H. RAUCH, M. D., *Secretary*.

NOTE.—If additional copies of either Order are needed, state how many, and they will  
be at once forwarded.

[Correction Blank.]

ILLINOIS STATE BOARD OF HEALTH,

OFFICE OF THE SECRETARY,

Springfield, ..... 1882.

Your *Return of Vaccination Certificates* is herewith returned for completion. The  
marked passages in the accompanying copy of Order No. 50, indicate what is necessary.

You have until March 3, in which to perfect your *Returns*, so that there is no valid  
reason why all the data required in the Order should not be furnished. Please read the  
Order carefully, and insist upon a strict compliance with its requirements by all your  
pupils. This will save all concerned much future trouble and annoyance.

.....  
.....  
.....  
.....

Respectfully,

JOHN H. RAUCH, M. D., *Secretary*......*Teacher*,  
..........*Co., Ill.*


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\* Addressed to the County Clerks.



It remains now, before proceeding to a consideration of the results of the School-Vaccination Order, to formally recognize the share taken by the school authorities in this effort of the BOARD to promote the welfare of the schools, by securing the protection of the scholars against a loathsome plague. In less than half a dozen instances was the BOARD compelled to exercise its legal authority in securing compliance with the Order. Every other means was exhausted before resorting to this; explanation, argument, appeal, personal visits by the Secretary, were all tried first, and, with the few exceptions noted, with ultimate success.

But all these measures would probably have proved inadequate, had not the BOARD been sustained by the school officials. Beginning with the office of the State Superintendent of Public Instruction, down to the teacher of the smallest district school, with hardly an exception, there was accorded to the BOARD a ready, earnest and intelligent support and co-operation. Here and there, a school director or trustee, or, perchance, a parent, manifested some opposition, inspired, usually, by prejudice, ignorance, and the fulminations of the anti-vaccinationists. But such recalcitrants usually found themselves in a hopeless minority, and, as a rule, soon yielded to the arguments and explanations offered, or to the example of the majority.

With very few exceptions, the County Superintendents took an active, personal interest in the work, often at their own individual expense, and always at a considerable outlay of time and labor. The following extract is fairly illustrative of the correspondence received from these officials:

"I think the Order of the STATE BOARD OF HEALTH, regarding the vaccination of school-children, should be made a part of the school law, and all directions for its execution and for its reports should be printed in the law, so that all can know their duties. Circulars are soon lost or worn out.

"There is no doubt that the Vaccination Order came just in time last winter to save our schools and county from a terrible plague."

School Boards, in like manner, gave efficient support, frequently passing supplementary orders of their own, embodying the substance of the STATE BOARD's Order and enforcing it by their own authority.

Upon the School Teachers, themselves, however, devolved the most arduous and responsible share of the labor. The careful and intelligent inspection of certificates, and their accurate return to the office of the STATE BOARD, were duties requiring time, patience and an amount of interest in the public welfare which it was hardly to be expected would have been accorded so generally and so generously—for it should be remembered that this work was done without recompense. The enormous mass of Returns preserved in the office of the STATE BOARD OF HEALTH, is a substantial testimonial to the intelligence and public spirit of the public-school teachers of Illinois.

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\*HON. G. R. SHAWHAN, County Superintendent of Schools, Champaign county.

## STATISTICAL RESULTS

### OF THE

## SCHOOL-VACCINATION ORDER.

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OF the total number of enrolled scholars in Illinois in the fall of 1881, returns and other data in the office of the STATE BOARD OF HEALTH indicate that considerably less than one-half (45.34 per cent.) were protected against small-pox at the date when the Vaccination Order was issued, requiring children to present satisfactory evidence of proper and successful vaccination before being admitted to the public schools after January 1, 1882.

Within sixty days thereafter, that is, before the last of February, 1882, nearly ninety-three per cent. (92.92) of all those in attendance in the State at large, had presented this evidence; and of the remaining fraction, 1.2 per cent. had presented evidence of protection by previous attack of small-pox, or of apparent insusceptibility by repeated unsuccessful vaccination. So that the ratio of protected school-children was more than doubled within a few weeks—increased from 45 per cent. to 94 per cent. of all those in attendance.

These figures, indeed, understate the work accomplished in this brief period; since they do not include over twenty per cent. of re-vaccinations performed after December 1, 1881. As more than two-thirds of these revaccinations proved successful—thus demonstrating the renewed susceptibility of that number—this proportion ( $20.88 \times .678 = 14.15$ ) should be deducted from the 45.34 per cent. classified as protected by vaccination before the date of the Order. This would then show that, on the one hand, 68.81 per cent., or more than two-thirds of the entire public school population of Illinois, was susceptible to small-pox on the 1st of December, 1881; and that, on the other hand, there was less than 6 per cent. of unprotected and susceptible remaining among those actually in attendance on the 1st of March, 1882. In other words, that, the vaccinal protection of 450,000 public-school children, in round numbers, had been secured within sixty days.

The foregoing proportions are based upon the returns of 304,586 individual scholars, whose names, ages, sexes and vaccinal history were forwarded to the STATE BOARD in the following form:

## ILLINOIS STATE BOARD OF HEALTH.—FORM NO. 52.

## RETURN OF VACCINATION CERTIFICATES.

1. From the Principal of the common school at Alpha, in District Number 1, Township Number 13, Range Number 1 W. of the third principal meridian, in the county of Woodford, State of Illinois.
2. From the Principal of the ..... school, in the city of ..... county of ..... State of Illinois.

## EXPLANATIONS.

1. In country schools, use the first heading; in city schools, use the second heading. The principal of a *graded school* may make out the RETURN for the whole school. Use the common designations of the schools in towns or cities, as *Dearborn, Third Ward, Front street*, etc.

2. For convenience of tabulating in the Secretary's office, it is desired that the names of all girls be given consecutively, and follow with the boys' names—instead of mingling masculine and feminine names indiscriminately.

3. Names of months may be indicated by figures, thus: *December 31, 1881*, may be written 12 | 31 | '81; *January 1, 1882*, may be written 1 | 1 | '82.

4. Designate the kind of Virus used by a cross (X) in the proper column—"B." for bovine, "H." for humanized.

5. Designate the character of the scar, in the columns "Result," by a cross (X) under the appropriate initial—T. for "typical," M. for "modified," B. for "bad." Write the word *Failure* across these three columns where that is the result.

6. This RETURN should be completed and mailed to the Secretary's office promptly at the end of the second month of the school year, or as soon thereafter as practicable.

Supplemental Returns (on this Form) must be made at the end of each term, embracing all new pupils, and the perfected records of those previously returned imperfectly.—See Circular No. 112, S. B. H., September 20, 1882.

7. Additional blanks of this form may be obtained by addressing the Secretary STATE BOARD OF HEALTH, Springfield.

Name.	AGE.		Date of vaccination.....	VIRUS.		Date of examination.....	RESULT.			PREVIOUS VACCINATION Year	RESULT.		
	Years.....	Months.....		B.	H.		T.	M.	B.		T.	M.	B.
1 Cora Campbell.....	11	3	1-9-82	X		2-7-82	X						
2 Nellie Price.....	12		1-13-82		X	2-28-82	X						
3 *Maggie Morgan.....	14		12-30-81	X		2-25-82				81		X	
4 Lovie Handlin.....	15		12-29-81	X		1-18-82	X						
5 Myrtle Clarke.....	16	2	12-18-81	X		1-21-82	X			71	X		
6 †Jessie Patterson.....	13												
7 Belle Walden.....	15		1-5-82			2-5-82		X					
8 Mamie Ellis.....	6		1-2-82	X		2-21-82	X						
9 †Hattie Orr.....	7	3											
10 *Della McLeod.....	8		12-31-81	X	X	2-7-82	X						
11 Louisa Reid.....	14		1-3-82			1-13-82	X						
12 Margaret Burt.....	15		1-3-82	X		1-13-82	X						
13 Susan Curtiss.....	16	3	1-3-82	X		1-21-82	X						
14 Edith Flemming.....	15		4-24-81	X		1-21-82	X			76	X		
15 **Lelia Johnston.....	14	1	12-25-81	X		2-1-82	X			72			
16 Lillie Meacham.....	17		12-28-81	X		2-1-82	X			74	X		
17 Mattie Rynders.....	6		1-15-82	X		2-1-82	X						
18 Flora Dessau.....	6		1-15-82		X	2-1-82		X					
19 Amy Vanwinkle.....	14		1-3-82	X		1-21-82			X	78			
20 Jennie McAlister.....	12		12-30-81	X		1-18-82		X		76	X		
21 Theresa Bodine.....	15		1-7-82	X		1-30-82			X	76	X		
22 Lucy Lindsay.....	9		1-7-82	X		1-30-82	X						
23 Clara Snow.....	12		1-3-82	X		1-21-82	X						
24 Rosa Kellogg.....	7		1-5-82	X		2-1-82	X						
25 Alice Turner.....	11		1-5-82	X		2-1-82	X						

\* Successfully vaccinated before receipt of Order.

† Has had small-pox.

§ "Not safe to vaccinate; erysipelatous diathesis."—Dr. Simpson.

¶ Twice with bovine; once with humanized. Both failures.

\*\* No result. Developmental change not yet taken place."—Dr. Greene.

Name.	AGE.		Date of vaccination.....	VIRUS.		Date of examination.....	RESULT.			PREVIOUS VACCIN. Year	RESULT.		
	Years.....	Months.....		B.	H.		T.	M.	B.		T.	M.	B.
26 Thomas Hunt.....	14	5	1-5-82	×		1-24-82	×			74	×		
27 Hugh Arlington.....	16		1-3-82	×		1-23-82	×						
28 *Richard Hummell.....	16		1-3-82	×		1-23-82	×						
29 Paul Hollingsworth.....	14	4	4-26-81	×		1-2-82	×						
30 †Phillip Rainey.....	14	3	1-25-82	×						72	×		
31 Ralph Williams.....	13		1-3-82	×		1-25-82		×					
32 Francis Graham.....	15	9	12-26-81	×		1-23-82	×						
33 Robert Houser.....	16		1-3-82	×		1-25-82	×			74	×		
34 John Ryan.....	15	10	12-26-81	×		1-23-82	×						
35 Clark Miller.....	17		1-3-82	×		1-23-82	×						
36 Willis Paddock.....	18		1-3-82	×		1-27-82	×			77	×		
37 ‡Andrew Orr.....	11												
38 Bertie Day.....	12		1-13-82		×	2-23-82	×						
39 Carroll Hickox.....	9		12-30-81	×		1-25-82			×	81		×	
40 Marvin Reese.....	13		12-31-81	×		1-25-82		×		71	×		
41 Kent Clendenin.....	15		12-29-81	×		1-25-82	×						
42 Charles Leland.....	16	2	12-18-81	×		1-10-82	×						
43 Frederick Rutz.....	10		3--81	×		2-28-82	×						
44 Storrs Haskell.....	9		2-10-81	×		1-2-82		×					
45 George Lord.....	14		1-5-82	×		2-5-82		×		74	×		
46 Elon Hudson.....	13		12--77		×	1-5-81		×		75	×		
47 James Roberts.....	15		1-5-82	×		1-25-82		×					
48 *John Blair.....	13		1-2-82	×					×				
49 Chester Thayer.....	10		1-2-82	×		12-15-82	×						
50 Lincoln Smythe.....	11	8	1-2-82	×		2-15-82	×						

I CERTIFY that the foregoing is a correct abstract of the data contained in the Certificates of Vaccination presented by the scholars in attendance at this school during the month of February, 1882; that the names given correspond with those on the register and schedule of this school for said month; and that no scholar has been admitted, or is now in attendance, who has not complied with the current order of the ILLINOIS STATE BOARD OF HEALTH relative to the vaccination of school children.

JOHN S. HART, *Principal.*

† Has been revaccinated twice before without result.

\* Has had small-pox.

‡ "Not safe to vaccinate; erysipelatos diathesis."—Dr. Simpson.

These fifty names and their corresponding records are taken at random from the Returns of fifteen schools in five different counties, simply to illustrate the *materiel* which forms the basis of the Tables which follow. For obvious reasons the localities and other means of identification of the individuals are more or less disguised; but each entry is a literal transcript from the teacher's Return on file in the office of the BOARD.

Over 11,000 of these Returns (11,720), averaging about 26 names each, were received and examined, the faulty and incomplete returned for correction, and in June, 1882, the work of tabulation was begun.

With the limited clerical force at the disposal of the BOARD, and the pressure of other duties frequently causing the work to be suspended for long intervals, the progress of the tabulation was unavoidably slow. In many respects the work was novel, and much of it required the exercise of technical knowledge, which compelled constant supervision.\*

\* Some idea may be formed of the merely clerical labor involved, by considering that over two million different items are embraced in these Returns, each of which items required examination, and subsequently entered into the composition of the appended Tables.



As will be seen, by examining the specimen Return above given, the data accumulated made it feasible to determine—

1. The vaccinal status of the school population, by sexes and ages, at two different periods, viz: December 1st, 1881, and March 1st, 1882.

2. The results of vaccination and revaccination, in each sex, and at different ages, with different kinds of virus.

The first division contains four subdivisions; (*a*) those who had been vaccinated once only prior to December 1, 1881; (*b*) those who had been revaccinated prior to December 1, 1881; (*c*) those who were vaccinated for the first time subsequent to December 1, 1881; (*d*) those who were revaccinated subsequent to December 1, 1881; sexes and ages (8 groups), specified in each class.

The second division also embraces four subdivisions; (*a*) the results of primary vaccinations with bovine virus, ages (8 groups), and sexes specified; (*b*) the same, with humanized virus; (*c*) the results of revaccinations with bovine virus, sexes and ages (4 groups), specified; (*d*) the same, with humanized virus.

In preparing these various tables six different check-sheets were employed, of which the following are illustrations:

CHECK-SHEET NO. 1.

S. B. H. VACCINATION STATISTICS, . . . . . COUNTY.

Primary Vaccinations before December 1, 1881.

Under 8 years.	Girls.	
	Boys.	
8 to 10.	Girls.	
	Boys.	
10 to 12.	Girls.	
	Boys.	
12 to 13.	Girls.	
	Boys.	
13 to 14.	Girls.	
	Boys.	
14 to 15.	Girls.	
	Boys.	
15 to 18.	Girls.	
	Boys.	
Over 18 years.	Girls.	
	Boys.	

## Primary Vaccinations since December 1, 1881.

Under 8 years.	Girls.	
	Boys.	
8 to 10.	Girls.	
	Boys.	
10 to 12.	Girls.	
	Boys.	
12 to 13.	Girls.	
	Boys.	
13 to 14.	Girls.	
	Boys.	
14 to 15.	Girls.	
	Boys.	
15 to 18.	Girls.	
	Boys.	
Over 18 years.	Girls.	
	Boys.	

Check-Sheets Nos. 2, 3 and 4 contain the same groups of ages for each sex, and relate to the following facts:

No. 2.—Revaccinations before December 1, 1881; Revaccinations after December 1, 1881.

No. 3.—Results of Primary Vaccinations—Typical, Modified, and Bad or Failure, separately.

No. 4.—The same, with respect to Humanized Virus.

No. 5.—The same as Nos. 3 and 4, with respect to Revaccinations with Bovine and with Humanized Virus, separately.

## CHECK-SHEET No. 6.

## S. B. H. VACCINATION STATISTICS.....COUNTY.

Total number public schools:..... Total number making returns:.....  
Total number enrolled scholars:..... Total number accounted for:.....

No. 1. ....copies. }	Cheek-sheets belonging to this county. }	No. 4. ....copies
No. 2. ....copies. }		No. 5. ....copies
No. 3. ....copies. }		No. 6. ....copies

*MEMORANDA:—Concerning children who have had Small-pox or Varioloid; who have left school, with reasons therefore; who have been repeatedly vaccinated unsuccessfully; notes and comments of teachers, physicians, etc.:*

The Returns from each county having been checked off upon these sheets, and the various memoranda made as indicated on Check-Sheet No. 6, the several items were next grouped in the form of an

Abstract; and the Vaccinal Status, and the Comparative Results of Vaccination and Revaccination with Bovine and with Humanized Virus, were tabulated by Sexes and Ages. Specimens of these Abstracts and Tables, for two typical counties, are here given as illustrations:

COOK COUNTY—*Chicago included.*

(1)	Total number public schools.....	204
(2)	Total number enrolled scholars.....	96,273
(3)	Average number scholars in attendance.....	61,037
(4)	Total number returned to S. B. H.....	81,702

ABSTRACT OF RETURNS OF VACCINAL HISTORY.

[This Abstract pertains to the 81,702 scholars returned to the STATE BOARD OF HEALTH.]

(5)	Total number vaccinated prior to December 1, 1881.....	51,096	
(6)	Total number revaccinated prior to December 1, 1881.....	16,683	
(7)	Total number vaccinated or revaccinated at date of Order No. 50.....	67,779	67,779
(8)	Total number vaccinated (first time) after December 1, 1881.....	12,214	12,214
(9)	Total number revaccinated after December 1, 1881.....	31,053	
(10)	Total number vaccinated or revaccinated subsequent to date of Order No. 50.....	43,267	
(11)	*Total number not vaccinated, or vaccinated but imperfectly re- ported, or otherwise accounted for.....	1,709	1,709
(12)	Total number returned to S. B. H.....		81,702
(13)	Percentage of vaccinated or revaccinated prior to date of Order No. 50.....		82.93
(14)	Percentage of vaccinated or revaccinated at date of Returns.....		97.91

\*This item (No. 11.) includes 753 scholars who were protected by previous attacks of small-pox or varioloid. Among those vaccinated but "imperfectly reported," in 956 cases the date, or sex, or age, or virus, was not specified, or the "result" was not definitely characterized. These are necessarily omitted from the following tabulations.

VACCINAL STATUS OF SCHOLARS AT DATE OF MAKING RETURNS.

(15)	Total number vaccinated once only prior to Dec. 1, 1881.....	51,096
------	--	--------

	Under 12 Years.		Between 12-13.		Between 13-14.		Between 14-15.		Between 15-18.		Over 18 Years.	
	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
(16)	17,983	18,856	2,645	2,571	1,918	1,855	1,363	1,247	1,454	901	212	61
(17)	Total number vaccinated (first time) after December 1, 1881.....											12,214
(18)	4,213	4,516	628	618	493	464	261	325	374	306	57	49
(19)	Total number revaccinated prior to December 1, 1881.....											16,683
(20)	5,444	5,421	951	1,032	714	746	575	471	633	544	110	22
(21)	Total number revaccinated after December 1, 1881.....											31,053
(22)	9,968	10,519	1,925	1,799	1,444	1,388	1,055	919	1,130	707	154	45
(23)	Total number vaccinated prior to date of Order No. 50.....											67,779
(24)	23,427	24,277	3,596	3,603	2,602	2,601	1,938	1,718	2,107	1,445	322	83
(25)	Total number vaccinated or revaccinated subsequent to date of Order No. 50.....											43,267
(26)	14,181	15,035	2,553	2,417	1,847	1,852	1,316	1,244	1,504	1,013	211	94

COMPARATIVE RESULTS OF VACCINATION AND REVACCINATION WITH BOVINE AND  
WITH HUMANIZED VIRUS, AT GIVEN AGES AND IN EACH SEX.

PRIMARY VACCINATIONS.

RESULT WITH BOVINE VIRUS.					RESULT WITH HUMANIZED VIRUS.				
		Typi- cal.	Modi- fied.	Fail- ure.			Typi- cal.	Modi- fied.	Fail- ure.
Under 8 years.	Girls. Boys.	3,254 3,974	250 284	105 135	Under 8 years.	Girls. Boys.	91 104	11 5	1 3
8 to 10	Girls. Boys.	3,458 3,465	300 270	158 123	8 to 10.	Girls. Boys.	97 79	6 8	1 1
10 to 12	Girls. Boys.	2,415 2,418	268 175	103 119	10 to 12.	Girls. Boys.	80 71	4 13	..... .....
12 to 13	Girls. Boys.	935 971	84 135	51 50	12 to 13.	Girls. Boys.	23 25	1 .....	1 2
13 to 14	Girls. Boys.	640 612	89 69	34 39	13 to 14.	Girls. Boys.	3 10	3 1	..... 1
14 to 15	Girls. Boys.	399 419	48 77	34 40	14 to 15.	Girls. Boys.	13 16	..... .....	..... 1
15 to 18	Girls. Boys.	482 548	70 49	57 32	15 to 18.	Girls. Boys.	2 11	..... .....	..... 1
Over 18.	Girls. Boys.	95 65	2 9	10 2	Over 18.	Girls. Boys.	..... .....	1 .....	..... .....
Totals.....		23,983	2,179	1,092			625	53	12

REVACCINATIONS.

RESULT WITH BOVINE VIRUS.					RESULT WITH HUMANIZED VIRUS.				
		Typi- cal.	Modi- fied.	Fail- ure.			Typi- cal.	Modi- fied.	Fail- ure.
Under 12.	Girls. Boys.	8,252 7,911	2,411 2,509	2,212 2,220	Under 12.	Girls. Boys.	365 365	23 21	7 31
12 to 13.	Girls. Boys.	1,465 1,407	504 410	410 363	12 to 13.	Girls. Boys.	25 29	7 4	13 11
13 to 14.	Girls. Boys.	1,066 909	376 374	330 333	13 to 14.	Girls. Boys.	44 29	40 4	3 8
Over 14.	Girls. Boys.	1,733 1,555	660 477	634 452	Over 14.	Girls. Boys.	20 26	11 9	7 4
Totals.....		24,098	7,721	6,954	Totals.....		903	119	84

WAYNE COUNTY.

(1)	Total number public schools.....	117
(2)	Total number enrolled scholars.....	6,372
(3)	Average number scholars in attendance.....	4,014
(4)	Total number returned to S. B. H.....	3,286



ABSTRACT OF RETURNS OF VACCINAL HISTORY.

[This Abstract pertains only to the 3 286 scholars returned to the STATE BOARD OF HEALTH.]

(5)	Total number vaccinated prior to December 1, 1881 .....	474	
(6)	revaccinated prior to December 1, 1881.....		
(7)	Total number vaccinated or revaccinated at date of Order No. 50.....	474	474
(8)	Total number vaccinated (first time) after December 1, 1881 .....	2,429	2,429
(9)	revaccinated after December 1, 1881.....	226	
(10)	Total number not vaccinated or revaccinated subsequent to date of Order No. 50.....	2,655	
(11)	*Total number not vaccinated, or vaccinated but imperfectly, or otherwise accounted for.....	383	383
(12)	Total number returned to S. B. H.....		3,286
(13)	Percentage of vaccinated or revaccinated prior to date of Order No. 50 .....		14.42
(14)	Percentages of vaccinated or revaccinated at date of Returns.....		88.34

\*This item (No. 11) includes 17 scholars who were protected by previous attacks of small-pox or varioloid. Among those vaccinated but "imperfectly reported," 88 presented no certificates, and in 278 other cases the date, or sex, or virus, was not specified, or the "result" was not definitely characterized. These are necessarily omitted from the following tabulations.

VACCINAL STATUS OF SCHOLARS AT DATE OF MAKING RETURNS.

(15) Total number vaccinated once only prior to December 1, 1881..... 474

	Under 12 years.		Between 12-13.		Between 13-13.		Between 14-15		Between 15-18.		Over 18 years.	
	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
(16)	70	74	31	30	32	34	18	30	46	58	21	30
(17)	Total number vaccinated (first time) after December 1, 1881.....											2,429
(18)	659	697	108	123	86	90	89	122	172	153	54	76
(19)	Total number revaccinated prior to December 1, 1881.....											
(20)												
(21)	Total number revaccinated after December 1, 1881.....											226
(22)	31	33	15	11	15	18	8	13	24	27	10	15
(23)	Total number vaccinated or revaccinated prior to date of Order No. 50.....											474
(24)	70	74	31	30	32	34	18	30	46	58	21	30
(25)	Total number vaccinated or revaccinated subsequent to date of Order No. 50.....											2,655
(26)	693	730	123	137	101	108	97	135	196	180	64	91

COMPARATIVE RESULTS OF VACCINATION AND REVACCINATION WITH BOVINE AND WITH HUMANIZED VIRUS, AT GIVEN AGES AND IN EACH SEX.

PRIMARY VACCINATIONS.

RESULT WITH BOVINE VIRUS.					RESULT WITH HUMANIZED VIRUS.				
		Typi- cal.	Modi- fied.	Fail- ure.			Typi- cal.	Modi- fied.	Fail- ure.
Under 8 years.	Girls. Boys.	159 158	20 15	33 26	Under 18 years	Girls. Boys.	4 13	1 3	1 1
8 to 10	Girls. Boys.	176 182	16 18	21 22	8 to 10	Girls. Boys.	15 22	1 .....	2 .....
10 to 12	Girls. Boys.	170 189	20 24	25 30	10 to 12	Girls. Boys.	12 22	4 2	4 3
12 to 13	Girls. Boys.	84 93	12 12	11 18	12 to 13	Girls. Boys.	5 11	1 .....	..... .....
13 to 14	Girls. Boys.	67 71	5 10	17 19	13 to 14	Girls. Boys.	8 11	1 .....	1 1
14 to 15	Girls. Boys.	64 90	8 11	17 14	14 to 15	Girls. Boys.	6 10	2 .....	..... .....
15 to 18	Girls. Boys.	120 113	14 22	22 21	15 to 18	Girls. Boys.	20 16	3 1	2 1
Over 18.	Girls. Boys.	42 56	6 12	9 13	Over 18.	Girls. Boys.	6 7	..... .....	..... .....
Totals.....		1,834	225	309			188	19	16

REVACCINATIONS.

RESULT WITH BOVINE VIRUS.					RESULT WITH HUMANIZED VIRUS.				
		Typi- cal.	Modi- fied.	Fail- ure.			Typi- cal.	Modi- fied.	Fail- ure.
Under 12	Girls. Boys.	10 13	7 6	9 8	Under 12	Girls. Boys.	3 1	..... .....	..... 2
12 to 13	Girls. Boys.	3 4	6 5	1 4	12 to 13	Girls. Boys.	2 .....	1 .....	..... 1
13 to 14	Girls. Boys.	1 8	4 3	6 3	13 to 14	Girls. Boys.	1 2	1 1	1 .....
Over 14.	Girls. Boys.	11 25	9 14	11 12	Over 14.	Girls. Boys.	2 3	1 .....	3 1
Totals.....		75	54	54			14	4	8

With the exception of seven counties, namely: Calhoun, Crawford, Franklin, Gallatin, Jasper, Massac and Richland—from which no Returns were received—sufficiently full data were obtained to complete similar Abstracts and Tables for every county in the State, together with a supplemental Abstract and Tables for the city of Chicago separately.

Upon these Abstracts and Tables are based the following aggregations:

I.—TABLE showing Number of Enrolled Scholars in each County; Number in Attendance; and Vaccinal Status December 1, 1881, and at Date of making Returns.\*

Counties.	Total number of enrolled scholars.....	Average number of scholars in attendance.....	Total number of scholars returned to S. B. H.....	Protected before Dec. 1, 1881.			Protected after Dec. 1, 1881.			Whole number protected by vaccination or revaccination.....	Otherwise accounted for.....
				By primary vaccination.....	By vaccination and revaccination.....	Total.....	By primary vaccination.....	By vaccination and revaccination.....	Total.....		
Adams.....	11,923	7,511	5,164	2,345	97	2,442	2,566	1,517	4,083	5,008	156
Alexander.....	2,418	1,523	969	429	1	421	524	294	818	945	24
Bond.....	3,997	2,518	1,769	504	10	514	1,132	391	1,433	1,646	123
Boone.....	2,727	1,818	1,674	199		199	1,166	108	1,274	1,365	309
Brown.....	3,513	2,213	824	326	8	334	428	154	582	762	62
Bureau.....	8,494	5,294	4,222	1,815	3	1,818	1,908	760	2,668	3,726	496
Carroll.....	4,969	3,130	1,678	376		376	974	188	1,162	1,550	328
Cass.....	3,612	2,275	1,058	528	17	545	465	144	609	1,010	28
Champaign.....	11,014	6,933	5,974	2,240	45	2,285	3,584	615	4,199	5,860	105
Christian.....	7,466	4,702	2,645	626	13	639	1,906	310	2,216	2,515	100
Clark.....	6,038	3,804	977	217		217	745	83	828	962	15
Clay.....	4,780	3,011	1,557	338		338	1,046	154	1,200	1,384	173
Clinton.....	3,853	2,427	754	297		297	449	206	655	746	8
Coles.....	7,391	4,600	2,774	801	7	808	1,796	523	2,319	2,604	170
Cook.....	27,659	24,959	20,662	12,857	4,206	17,063	3,079	7,823	10,902	20,142	520
Cumberland.....	3,906	2,460	388	88	2	90	286	50	345	376	12
DeKalb.....	6,812	4,291	2,232	1,067	22	1,089	1,037	421	1,058	2,126	106
DeWitt.....	4,680	2,948	1,284	424	8	432	796	174	970	1,228	56
Douglas.....	4,737	2,984	1,837	507	6	513	1,271	204	1,475	1,784	53
DuPage.....	3,717	2,311	2,357	874	239	1,113	997	522	1,519	2,110	247
Edgar.....	6,776	4,270	534	76		76	434	62	496	510	24
Edwards.....	2,568	1,617	1,113	201	10	214	835	45	880	1,049	64
Effingham.....	4,238	2,668	554	59	1	60	471	41	512	531	23
Fayette.....	6,487	4,086	1,154	292	3	295	810	147	957	1,105	49
Ford.....	3,984	2,510	1,658	585	11	596	1,014	198	1,212	1,610	48
Fulton.....	10,747	6,770	6,421	2,832	63	2,895	3,164	1,515	4,679	6,059	362
Greene.....	5,754	3,625	1,337	462	16	478	814	273	1,087	1,297	45
Grundy.....	5,344	3,366	1,813	695	18	713	815	404	1,219	1,528	285
Hamilton.....	4,639	2,922	255	32		32	182	13	195	214	41
Hancock.....	9,527	6,002	3,995	1,561	43	1,604	1,942	901	2,843	3,546	449
Hardin.....	1,850	1,105	405	50		50	343	47	390	393	12
Henderson.....	2,732	1,720	1,089	492	2	494	501	164	665	995	94
Henry.....	9,732	6,143	4,911	1,859	9	1,868	2,275	833	3,108	4,143	768
Iroquois.....	9,323	5,873	5,447	2,657	570	3,227	2,073	1,356	3,429	5,306	147
Jackson.....	6,497	4,136	661	137		137	514	123	637	651	10
Jefferson.....	5,849	3,680	361	43		43	312	33	345	355	6
Jersey.....	3,973	2,502	1,311	503	12	515	757	304	1,061	1,272	39
Jo Daviess.....	6,448	4,062	3,088	837	4	841	1,604	413	2,017	2,445	593
Johnson.....	3,886	2,448	1,129	31		31	739	25	755	761	368
Kane.....	9,308	5,864	2,205	1,020	130	1,150	972	476	1,448	2,122	143
Kankakee.....	6,127	3,860	3,002	1,499	315	1,814	1,129	723	1,852	2,943	59
Kendall.....	2,661	1,676	1,381	339	70	409	775	198	973	1,184	290
Knox.....	8,956	5,630	4,566	1,754	29	1,783	2,210	551	2,761	3,993	573
Lake.....	5,054	3,184	1,922	1,108	207	1,315	562	515	1,077	1,877	45
LaSalle.....	17,290	10,892	7,392	3,932	786	4,718	2,372	1,702	4,074	7,090	302
Lawrence.....	4,070	2,564	911	84		84	815	77	862	899	12
Lee.....	7,190	4,530	2,662	953	134	1,087	1,253	457	1,710	2,340	322
Livingston.....	10,682	6,730	5,190	2,756	311	3,067	1,963	1,113	3,076	5,030	160
Logan.....	6,457	4,068	2,834	1,396	111	1,507	1,240	717	1,957	2,747	87
Macon.....	7,607	4,732	3,154	1,493	91	1,584	1,473	859	2,333	3,058	96
Macoupin.....	9,598	6,046	1,339	533	21	554	741	332	1,073	1,295	44
Madison.....	10,154	6,397	3,061	1,235	23	1,258	1,722	751	2,473	2,980	84
Marion.....	5,902	3,756	1,056	308		308	649	172	821	957	99

\*"Protected," as here used and following, is used merely to indicate the two classes returned as Vaccinated and Revaccinated.

Table I.—Continued.

Counties.	Total number of enrolled scholars.....	Average number of scholars in attendance.....	Total number of scholars returned to S. B. H.....	Protected before Dec. 1, 1881.			Protected after Dec. 1, 1881.			Whole number protected by vaccination or re-vaccination.....	Otherwise accounted for.....
				By primary vaccination.....	By vaccination and re-vaccination.....	Total.....	By primary vaccination.....	By vaccination and re-vaccination.....	Total.....		
Marshall .....	3,655	2,302	1,322	567	71	638	527	257	784	1,165	157
Mason .....	4,686	2,952	985	306	5	311	627	112	739	938	47
McDonough.....	7,322	4,613	2,250	1,007	32	1,039	1,113	420	1,533	2,152	98
McHenry.....	6,044	3,807	5,124	2,704	69	2,773	2,244	1,019	3,263	5,017	107
McLean.....	14,299	9,008	7,754	4,473	1,020	5,493	2,043	2,183	4,226	7,536	218
Menard.....	3,163	1,995	423	115	3	118	260	44	304	378	45
Mercer.....	5,322	3,353	1,950	688	5	693	915	321	1,236	1,608	342
Monroe.....	2,399	1,510	1,933	659	.....	659	1,111	586	1,697	1,770	163
Montgomery.....	7,436	4,684	3,023	1,242	32	1,274	1,662	766	2,438	2,936	87
Morgan.....	7,124	4,488	2,550	1,088	44	1,132	1,338	688	2,026	2,470	80
Moultrie.....	3,901	2,457	1,989	483	26	503	855	200	1,055	1,358	31
Ogle.....	7,820	4,726	316	106	.....	106	206	76	282	312	4
Peoria.....	11,718	7,382	6,851	3,097	460	3,557	2,532	1,517	4,049	6,089	762
Perry.....	3,664	2,300	595	152	.....	152	423	117	540	575	21
Piatt.....	4,347	2,738	2,530	1,074	45	1,119	1,354	475	1,829	2,473	57
Pike.....	8,963	5,646	2,550	1,019	39	1,058	1,410	622	2,032	2,468	82
Pope.....	3,651	2,300	699	65	.....	65	591	27	618	656	43
Pulaski.....	3,146	1,982	351	78	.....	78	254	53	307	332	19
Putnam.....	1,378	868	657	268	.....	268	377	173	550	645	12
Randolph.....	5,653	3,560	2,213	580	10	590	1,465	380	1,845	2,055	158
Rock Island.....	8,653	5,454	6,997	2,320	20	2,340	3,295	1,115	4,410	5,635	1,362
Saline.....	4,653	3,930	1,010	211	2	213	729	125	854	942	98
Sangamon.....	4,549	2,865	1,813	798	33	831	926	509	1,435	1,757	56
Schuyler.....	4,344	2,736	1,994	836	25	861	978	411	1,389	1,839	155
Scott.....	2,722	1,714	936	200	11	211	413	101	514	644	292
Shelby.....	8,205	6,169	3,303	1,094	30	1,124	2,104	488	2,592	3,228	75
Stark.....	2,735	1,723	1,519	592	53	645	642	288	930	1,287	232
St. Clair.....	11,639	7,342	8,006	3,400	30	3,430	4,375	2,071	6,446	7,895	201
Stephenson.....	8,639	5,437	3,700	1,490	28	1,518	1,783	619	2,402	3,391	399
Tazewell.....	6,746	4,250	1,635	841	163	1,004	517	410	927	1,521	114
Union.....	5,013	3,158	307	66	.....	66	197	64	261	263	44
Vermilion.....	10,777	6,790	4,058	1,753	226	1,979	1,995	692	2,687	3,974	84
Wabash.....	2,733	1,720	962	160	3	163	759	117	906	922	40
Warren.....	5,908	3,722	2,530	900	11	911	1,214	354	1,568	2,125	405
Washington.....	4,640	2,923	426	96	1	97	270	33	308	367	59
Wayne.....	6,372	4,014	3,286	474	.....	474	2,429	226	2,655	2,903	383
White.....	5,742	3,617	2,444	425	3	428	1,759	231	1,990	2,187	257
Whiteside.....	8,749	5,512	3,302	1,132	88	1,220	1,561	546	2,107	2,781	521
Will.....	12,377	7,797	4,725	2,377	503	2,880	1,414	1,420	2,834	4,294	431
Williamson.....	5,663	3,578	596	114	.....	114	478	50	528	592	4
Winnebago.....	7,093	4,468	4,256	1,110	16	1,126	2,507	491	2,998	3,633	623
Woodford.....	5,586	3,520	1,539	756	98	854	575	334	909	1,429	110
Totals.....	644,817	401,462	243,546	99,582	10,873	110,455	115,869	50,866	166,735	226,324	*17,222
City of Chicago.....	68,614	**	61,040	38,239	12,477	50,716	9,135	23,230	32,365	59,851	1,189
Grand totals.....	713,431	452,485	304,586	137,821	23,350	161,171	125,004	70,496	199,100	286,175	18,411

\*This total—"otherwise accounted for"—includes 2,204 children reported protected by previous attacks of small-pox or varioloid; and 1,498, who presented certificates from physicians to the effect that it was unsafe or inadvisable to then vaccinate. Among the Chicago scholars 525 are reported to have previously had small-pox or varioloid.

\*\*The average daily attendance (Chicago, as stated in the report of the Board of Education for the year ended July 31, 1882, was 51,023; but returns have been received for the number given in the next column, viz., 61,040.



II.—TABLE showing Percentages of Vaccinally Protected in each County, prior to December 1, 1881, and at Date of making Returns.

Counties.	Protected by primary vaccination prior to Dec. 1, 1881.	Protected by revaccination prior to Dec. 1, 1881.	Total percentage protected prior to Dec. 1, 1881.	Protected by primary vaccination subsequent to Dec. 1, 1881.	Total percentage protected at date of returns.	Protected by revaccination subsequent to Dec. 1, 1881.	Percentage otherwise accounted for.
Adams.....	45.40	1.88	47.28	49.69	96.97	29.18	3.03
Alexander.....	43.34	.10	43.44	54.08	97.52	30.31	12.48
Bond.....	28.48	.57	29.05	64.00	93.05	17.02	6.95
Boone.....	11.89	.....	11.89	69.65	81.54	6.45	18.46
Brown.....	39.53	1.00	40.53	51.94	92.47	18.68	7.53
Bureau.....	42.99	.07	43.06	45.16	88.22	18.00	11.78
Carroll.....	22.40	.....	22.40	58.55	80.95	11.25	19.05
Cass.....	50.86	1.64	52.50	44.80	97.30	13.87	2.70
Champaign.....	37.58	.67	38.25	59.99	93.24	10.29	1.76
Christian.....	23.63	.49	24.12	72.10	96.22	11.72	3.78
Clark.....	22.20	.....	22.20	76.26	98.46	8.50	1.54
Clay.....	21.76	.....	21.76	67.14	88.90	9.89	11.10
Clinton.....	39.39	.....	39.39	59.55	98.94	27.32	1.06
Coles.....	28.86	.24	29.10	64.76	93.86	18.84	6.14
Cook†.....	62.28	20.30	82.58	14.90	97.48	37.86	2.52
Cumberland.....	22.67	.52	23.19	73.73	96.92	15.21	3.08
DeKalb.....	38.94	9.85	48.79	46.46	95.25	18.41	4.75
DeWitt.....	32.98	.62	33.60	62.01	95.61	13.69	4.39
Douglas.....	27.58	.32	27.90	69.24	97.11	11.10	2.89
DuPage.....	37.08	10.15	47.23	42.28	89.51	22.16	10.49
Edgar.....	14.12	.....	14.12	71.27	85.39	11.61	14.61
Edwards.....	418.33	.89	19.22	74.96	94.18	4.94	5.82
Effingham.....	10.64	.18	10.82	85.55	96.37	7.42	3.63
Fayette.....	25.31	.28	25.62	70.15	95.77	12.76	4.23
Ford.....	35.29	.63	35.92	61.17	97.69	11.95	2.91
Fulton.....	41.10	.98	45.08	49.28	94.36	8.20	5.64
Greene.....	31.51	1.19	35.70	60.89	96.59	20.45	3.41
Grundy.....	38.33	1.00	39.33	44.95	84.28	22.28	15.72
Hamilton.....	12.54	.....	12.54	71.38	83.92	5.10	16.08
Hancock.....	39.06	1.08	40.14	48.61	88.75	22.56	11.25
Hardin.....	12.35	.....	12.35	83.94	96.29	11.60	3.71
Henderson.....	45.39	.18	45.57	46.22	91.79	8.63	8.21
Henry.....	37.85	.18	38.03	46.34	84.37	16.97	15.63
Iroquois.....	48.78	10.46	59.24	38.05	97.29	21.90	2.71
Jackson.....	20.72	.....	20.72	77.77	98.49	18.61	1.51
Jefferson.....	11.63	.....	11.63	87.71	99.34	9.14	.66
Jersey.....	38.37	.90	39.27	57.77	97.04	23.16	2.96
Jo Daviess.....	27.56	.14	27.70	52.79	80.49	13.59	19.51
Johnson.....	2.74	.....	2.74	64.84	67.58	2.21	32.42
Kane.....	45.04	5.75	50.79	42.92	93.71	21.02	6.29
Kankakee.....	49.93	10.49	60.42	37.61	98.03	24.08	1.97
Kendall.....	24.48	5.04	29.56	55.96	85.52	14.30	14.48
Knox.....	38.41	.63	39.04	48.41	87.45	12.07	12.55
Lake.....	57.64	10.83	68.47	29.23	97.70	28.87	2.30
LaSalle.....	53.19	10.64	63.83	32.09	95.92	17.02	4.08
Lawrence.....	9.22	.....	9.22	89.66	98.88	8.44	1.12
Lee.....	35.83	5.06	40.89	47.00	87.89	17.17	12.11
Livingston.....	53.10	5.99	59.09	37.82	96.91	21.45	3.09
Logan.....	49.25	3.93	53.18	44.76	96.94	25.31	3.06
Macon.....	47.33	2.90	50.23	46.73	96.96	27.24	3.04

\* Including those protected by previous attacks of small-pox or varioloid, and children presenting certificates of inadvisability.

† Exclusive of Chicago.

Table II.—Continued.

Counties.	Protected by primary vaccination prior to Dec. 1, 1881.....	Protected by revaccination prior to Dec. 1, 1881.....	Total percentage protected prior to Dec. 1, 1881.....	Protected by primary vaccination subsequent to Dec. 1, 1881.....	Total percentage protected at date of returns.....	Protected by revaccination subsequent to Dec. 1, 1881.....	Percentage otherwise accounted for.....
Macoupin.....	39.95	1.54	41.49	55.29	96.78	24.81	3.22
Madison.....	40.30	.75	41.05	56.21	97.26	24.51	2.74
Marion.....	29.17		29.17	61.45	90.62	16.29	9.38
Marshall.....	42.96	5.46	48.42	39.81	88.23	19.48	11.77
Mason.....	31.06	.51	31.57	63.72	95.29	11.37	4.71
McDonough.....	44.75	1.43	46.18	49.48	95.66	18.69	4.34
McHenry.....	53.01	1.35	54.36	43.55	97.91	19.88	2.09
McLean.....	57.69	13.15	70.84	26.36	97.20	28.15	2.80
Menard.....	27.13	.71	27.84	61.52	89.36	10.40	10.64
Mercer.....	35.28	.23	35.51	46.94	82.45	16.45	17.55
Monroe.....	34.09		34.09	57.42	91.51	30.32	8.49
Montgomery.....	41.09	1.07	42.16	54.97	97.13	25.34	2.87
Morgan.....	42.67	1.71	44.38	52.49	96.87	26.99	3.13
Moultrie.....	34.76	1.45	36.21	61.52	97.73	14.37	2.27
Ogle.....	33.54		33.54	65.19	98.73	24.05	1.27
Peoria.....	45.20	6.72	51.92	36.94	88.86	22.04	11.14
Perry.....	25.50		25.50	70.97	96.47	19.63	3.53
Piatt.....	42.45	1.79	44.24	53.53	97.77	18.76	2.23
Pike.....	39.95	1.54	41.49	55.29	96.78	21.81	3.22
Pope.....	9.29		9.29	84.54	93.83	3.86	6.17
Pulaski.....	22.22		22.22	72.37	94.59	15.10	5.41
Putnam.....	40.80		40.80	57.38	98.18	26.33	1.82
Randolph.....	26.21	.45	26.66	66.19	92.85	17.18	7.15
Rock Island.....	32.72	.28	33.00	47.53	80.53	15.93	19.47
Saline.....	20.32	.22	20.54	70.06	90.60	12.03	9.40
Sangamon.....	44.03	1.80	45.83	51.09	96.92	28.08	3.08
Schuyler.....	41.90	1.26	43.16	49.05	92.21	20.62	7.79
Scott.....	21.36	1.18	22.54	46.26	68.80	10.79	31.20
Shelby.....	33.11	.90	34.01	58.70	92.71	14.79	7.29
Stark.....	38.96	3.50	42.46	42.24	84.70	18.99	15.30
St. Clair.....	42.24	.60	42.84	54.65	97.49	25.87	2.51
Stephenson.....	40.28	.75	41.03	48.17	89.20	16.73	10.80
Tazewell.....	51.44	9.94	61.38	31.65	93.03	25.10	6.97
Union.....	21.49		21.49	64.18	85.67	20.85	14.33
Vermilion.....	43.18	5.57	48.75	49.19	97.94	17.60	2.06
Wabash.....	14.43	3.12	17.55	78.29	95.84	15.28	4.16
Warren.....	35.57	.45	36.02	47.97	83.99	14.00	16.01
Washington.....	22.54	.23	22.77	63.38	86.15	8.92	13.85
Wayne.....	14.42		14.42	75.92	88.34	68.80	11.66
White.....	17.37	.11	17.48	71.99	89.47	6.89	10.53
Whiteside.....	34.27	2.67	36.94	47.27	84.21	16.55	15.79
Will.....	50.30	10.65	60.95	29.93	90.88	30.07	9.12
Williamson.....	19.12		19.12	80.27	99.39	8.39	.61
Winnebago.....	26.08	.38	26.46	58.91	85.37	11.54	14.63
Woodford.....	49.15	6.35	55.50	37.38	92.88	21.75	7.12
ILLINOIS*.....	40.88	4.46	45.34	47.58	92.92	20.88	7.08
City of Chicago..	62.64	26.46	83.10	14.96	98.06	38.05	1.94

\* Exclusive of Chicago.

NOTE.—In order to facilitate comparison, the following group of Tables, III to VIII, inclusive, has been arranged so that the counties face each other on opposite pages, contrasting the different data, which show the vaccinal status of scholars at the two periods, before and after the date of the Vaccination Order.

## VACCINAL STATUS—

PRIOR TO DECEMBER 31, 1881.

III—TABLE showing Number of Scholars returned from each County, as having been Vaccinated (primary) PRIOR TO December 1, 1-81, at given Ages, and of each Sex.

Counties.	Sexes.	AGES.						TOTALS.	
		Under 12 years...	Between 12-13.....	Between 13-14.....	Between 14-15.....	Between 15-18.....	Over 18 years..	Each sex.	All ages..
Adams.....	Girls..	547	150	135	121	193	45	1,191	2,345
	Boys..	571	139	121	125	136	62	1,154	
Alexander.....	Girls..	122	24	40	24	32	1	243	420
	Boys..	113	21	15	15	13	.....	177	
Bond.....	Girls..	117	54	26	10	17	17	241	504
	Boys..	130	36	35	13	37	12	263	
Boone.....	Girls..	26	12	11	11	19	11	90	199
	Boys..	49	9	11	6	15	19	109	
Brown.....	Girls..	66	16	18	14	33	10	157	326
	Boys..	68	17	22	19	34	9	169	
Bureau.....	Girls..	350	107	88	94	169	34	872	1,815
	Boys..	440	110	44	115	144	85	943	
Carroll.....	Girls..	87	18	20	18	26	20	179	376
	Boys..	111	19	16	16	24	11	197	
Cass.....	Girls..	129	29	20	33	37	3	251	528
	Boys..	150	32	40	25	41	9	277	
Champaign.....	Girls..	375	135	108	164	252	72	1,106	2,240
	Boys..	315	167	105	165	25	131	1,134	
Christian.....	Girls..	137	49	26	29	49	9	299	626
	Boys..	137	28	43	26	73	20	327	
Clark.....	Girls..	39	8	14	20	25	8	114	217
	Boys..	16	22	12	13	22	18	103	
Clay.....	Girls..	68	13	16	24	34	10	165	338
	Boys..	65	26	18	17	27	20	173	
Clinton.....	Girls..	42	14	16	16	17	3	108	297
	Boys..	73	21	26	29	33	7	189	
Coles.....	Girls..	184	56	32	32	48	8	360	801
	Boys..	201	40	48	40	88	24	411	
*Cook.....	Girls..	4,516	666	485	341	365	52	6,425	12,857
	Boys..	4,744	650	472	318	234	14	6,432	
Cumberland.....	Girls..	19	6	9	6	4	1	45	88
	Boys..	22	7	2	3	6	3	43	
DeKalb.....	Girls..	187	65	54	58	117	20	501	1,067
	Boys..	226	67	43	73	109	48	566	
DeWitt.....	Girls..	85	35	21	20	31	14	206	424
	Boys..	84	31	25	21	39	18	218	
Douglas.....	Girls..	96	31	29	36	51	16	259	507
	Boys..	70	41	31	25	50	31	248	
DuPage.....	Girls..	210	49	43	38	52	28	420	874
	Boys..	267	44	42	24	38	39	454	
Edgar.....	Girls..	8	2	5	7	9	3	34	76
	Boys..	10	10	3	2	12	5	42	

\* Exclusive of Chicago, which is given separately at foot of table.



## —PUBLIC SCHOLARS.

✓ SUBSEQUENT TO DECEMBER 31, 1881.

IV.—TABLE Showing Number of Scholars returned from each County, as Vaccinated (primary) AFTER December 1, 1881, at given Ages and of each Sex.

Counties.	Sexes.	AGES.						TOTALS.	
		Under 12 years..	Between 12-13.....	Between 13-14.....	Between 14-15.....	Between 15-18....	Over 18 years....	Each sex.	All ages..
Adams.....	Girls..	784	112	102	77	108	23	1,206	2,566
	Boys..	858	115	105	88	152	42	1,360	
Alexander.....	Girls..	173	20	34	12	17	2	258	524
	Boys..	292	31	13	14	6	.....	266	
Bond.....	Girls..	353	42	34	33	54	20	536	1,132
	Boys..	387	60	35	43	52	19	596	
Boone.....	Girls..	280	71	36	49	73	9	518	1,166
	Boys..	311	68	66	60	102	41	648	
Brown.....	Girls..	114	17	18	17	24	7	197	428
	Boys..	130	47	20	14	35	15	231	
Bureau.....	Girls..	600	76	67	57	93	14	907	1,908
	Boys..	630	95	65	57	109	35	1,001	
Carroll.....	Girls..	268	40	30	35	55	6	434	974
	Boys..	316	15	44	45	67	23	540	
Cass.....	Girls..	120	25	16	14	21	5	201	465
	Boys..	129	34	18	22	46	15	264	
Champaign.....	Girls..	1,131	156	95	156	168	44	1,750	3,584
	Boys..	1,133	168	98	97	241	97	1,834	
Christian.....	Girls..	544	74	76	82	105	19	900	1,906
	Boys..	626	94	92	70	85	39	1,006	
Clark.....	Girls..	211	39	26	39	40	10	365	745
	Boys..	211	43	22	29	51	24	380	
Clay.....	Girls..	283	44	31	41	52	10	461	1,046
	Boys..	324	63	42	52	73	31	585	
Clinton.....	Girls..	130	8	12	9	23	1	183	449
	Boys..	182	16	22	18	25	3	266	
Coles.....	Girls..	574	72	54	53	67	9	829	1,796
	Boys..	664	90	72	54	69	18	967	
*Cook.....	Girls..	1,057	159	96	64	96	14	1,486	3,079
	Boys..	1,146	158	118	81	68	12	1,593	
Cumberland.....	Girls..	93	20	8	10	18	.....	149	286
	Boys..	86	16	9	10	10	6	137	
DeKalb.....	Girls..	322	41	36	33	52	9	493	1,037
	Boys..	324	57	37	36	67	23	544	
DeWitt.....	Girls..	249	32	22	30	37	12	382	796
	Boys..	262	49	25	26	45	18	414	
Douglas.....	Girls..	382	51	51	50	75	13	611	1,271
	Boys..	394	76	58	58	89	25	660	
DuPage.....	Girls..	289	56	30	31	47	7	460	997
	Boys..	318	55	48	39	56	21	537	
Edgar.....	Girls..	115	19	13	15	26	7	195	454
	Boys..	131	26	19	24	23	17	239	

\* Exclusive of Chicago which is given separately at foot of Table.

Table III.—Continued.

Counties.	Sexes.	AGES.						TOTALS.	
		Under 12 years...	Between 12-13....	Between 13-14....	Between 14-15....	Between 15-18....	Over 18 years..	Each sex.	All ages..
Edwards.....	Girls..	33	12	12	15	19	15	106	204
	Boys..	18	18	13	12	20	17	98	
Effingham.....	Girls..	6	3		4	13		26	59
	Boys..	7	6	6	3	7	4	33	
Fayette.....	Girls..	58	23	14	17	21	13	146	292
	Boys..	50	26	20	12	23	15	146	
Ford.....	Girls..	108	42	29	35	55	19	288	585
	Boys..	99	43	30	36	60	29	297	
Fulton.....	Girls..	627	169	146	146	249	55	1,392	2,832
	Boys..	689	167	117	167	197	103	1,440	
Greene.....	Girls..	104	33	23	23	37	8	228	462
	Boys..	107	24	28	22	40	13	234	
Grundy.....	Girls..	211	41	29	25	24	3	333	695
	Boys..	222	45	35	23	28	9	362	
Hamilton.....	Girls..	8	5	2	2	3	1	21	32
	Boys..	3	1	1	1	3	2	11	
Hancock.....	Girls..	389	86	89	76	114	25	799	1,561
	Boys..	425	89	73	78	92	25	762	
Hardin.....	Girls..	9	8	4	1	3	2	27	50
	Boys..	5	3	1	5	6	3	23	
Henderson.....	Girls..	102	21	23	24	37	7	214	492
	Boys..	113	29	24	22	62	24	278	
Henry.....	Girls..	441	99	100	87	145	32	904	1,859
	Boys..	504	110	63	104	128	46	955	
Iroquois.....	Girls..	709	162	114	117	159	51	1,312	2,657
	Boys..	717	165	120	117	159	67	1,345	
Jackson.....	Girls..	25	5	16	14	10	2	72	137
	Boys..	24	9	8	7	11	6	65	
Jefferson.....	Girls..	6	5	4	4	8		27	43
	Boys..	9		2	1	3	1	16	
Jersey.....	Girls..	121	40	25	20	30	5	241	503
	Boys..	132	30	30	25	35	10	262	
Jo Daviess.....	Girls..	208	37	47	37	55	17	401	837
	Boys..	253	47	32	36	53	15	436	
Johnson.....	Girls..	4	5	1		3	2	15	31
	Boys..	2	1	4	2	5	2	16	
Kane.....	Girls..	203	59	54	53	87	27	483	1,020
	Boys..	246	58	50	51	84	48	537	
Kankakee.....	Girls..	389	84	64	75	105	27	744	1,499
	Boys..	387	94	63	73	97	45	755	
Kendall.....	Girls..	63	20	18	17	26	16	160	339
	Boys..	92	17	18	10	19	23	179	
Knox.....	Girls..	421	88	103	72	140	18	844	1,754
	Boys..	492	105	68	88	122	35	910	
Lake.....	Girls..	284	63	52	47	76	13	535	1,108
	Boys..	302	63	48	54	78	28	573	
LaSalle.....	Girls..	1,103	214	170	144	199	44	1,874	3,932
	Boys..	1,356	207	155	140	155	45	2,058	

Table IV.—Continued.

Counties.	Sexes.	AGES.						TOTALS	
		Under 12 years...	Between 12-13.....	Between 13-14.....	Between 14-15....	Between 15-16....	Over 16 years....	Each sex.	All ages.
Edwards.....	Girls..	260	30	20	30	54	15	409	885
	Boys..	267	40	21	23	55	20	426	
Efingham.....	Girls..	140	15	18	19	22	8	222	471
	Boys..	148	20	28	13	30	10	249	
Fayette.....	Girls..	243	32	25	31	41	16	388	810
	Boys..	253	40	23	33	49	24	422	
Ford.....	Girls..	319	42	27	41	48	14	491	1,014
	Boys..	327	50	28	30	63	25	523	
Fulton.....	Girls..	980	127	143	94	144	35	1,523	3,164
	Boys..	1,043	142	110	93	190	63	1,641	
Greene.....	Girls..	244	33	33	28	38	7	383	814
	Boys..	272	33	37	28	42	14	431	
Grundy.....	Girls..	235	31	30	30	59	17	402	815
	Boys..	240	40	33	40	50	10	413	
Hamilton.....	Girls..	48	8	8	6	11	7	88	182
	Boys..	49	13	6	8	12	6	94	
Hancock.....	Girls..	607	78	74	56	84	11	913	1,942
	Boys..	680	82	74	70	96	27	1,029	
Hardin.....	Girls..	94	8	12	17	17	4	152	343
	Boys..	98	20	20	12	26	15	191	
Hendersen.....	Girls..	120	23	20	25	28	9	225	501
	Boys..	156	25	11	26	44	14	276	
Henry.....	Girls..	728	89	77	76	107	14	1,081	2,275
	Boys..	791	102	75	80	109	34	1,191	
Iroquois.....	Girls..	678	97	60	62	81	21	999	2,073
	Boys..	719	104	71	58	91	31	1,074	
Jackson.....	Girls..	161	22	15	15	19	2	234	514
	Boys..	159	28	25	24	30	14	280	
Jefferson.....	Girls..	76	13	17	9	23	2	140	312
	Boys..	88	14	16	15	25	14	172	
Jersey.....	Girls..	250	30	23	24	23	8	358	757
	Boys..	270	38	30	22	31	8	399	
JoDavies.....	Girls..	481	64	51	51	82	8	737	1,604
	Boys..	588	69	60	64	87	24	867	
Johnson.....	Girls..	196	30	27	21	48	14	336	730
	Boys..	206	36	34	28	60	20	394	
Kane.....	Girls..	289	47	32	31	47	8	454	972
	Boys..	298	56	42	36	64	22	518	
Kankakee.....	Girls..	371	53	33	36	41	10	547	1,129
	Boys..	389	55	37	31	52	18	582	
Kendall.....	Girls..	205	45	23	29	41	6	352	775
	Boys..	227	43	40	35	55	23	423	
Knox.....	Girls..	663	170	66	45	88	22	1,054	2,210
	Boys..	752	139	66	65	112	22	1,156	
Lake.....	Girls..	180	26	19	15	21	4	265	562
	Boys..	187	31	23	19	28	9	297	
LaSalle.....	Girls..	705	201	70	37	89	12	1,204	2,372
	Boys..	778	116	73	70	113	18	1,168	

Table III.—Continued.

Counties.	Sexes.	AGES.						TOTALS.	
		Under 12 years..	Between 12-13....	Between 13-14....	Between 14-15....	Between 15-18....	Over 18 years..	Each sex	All ages..
Lawrence.....	Girls..	8	4	5	10	12	7	46	81
	Boys..	6	2	5	2	14	9	38	
Lee.....	Girls..	210	56	48	48	86	10	458	953
	Boys..	237	58	38	57	76	29	495	
Livingston.....	Girls..	606	160	138	138	220	41	1,303	2,756
	Boys..	717	160	124	149	220	83	1,453	
Logan .....	Girls..	316	84	76	71	113	24	684	1,396
	Boys..	352	82	67	76	96	39	712	
Macon.....	Girls..	340	94	84	76	122	27	743	1,493
	Boys..	368	89	75	81	96	41	750	
Macoupin.....	Girls..	122	36	29	28	43	10	268	533
	Boys..	125	30	30	27	39	14	265	
Madison .....	Girls..	310	99	62	37	49	12	629	1,235
	Boys..	345	86	74	62	74	25	606	
Marion.....	Girls..	51	16	23	20	35	7	152	308
	Boys..	62	15	26	11	25	17	156	
Marshall.....	Girls..	153	34	29	22	30	7	275	567
	Boys..	181	28	21	26	28	5	292	
Mason.....	Girls..	74	17	15	12	23	7	148	306
	Boys..	69	16	21	7	37	8	158	
McDonough.....	Girls..	222	62	52	48	91	21	496	1,007
	Boys..	253	58	40	61	69	30	511	
McHenry.....	Girls..	428	165	149	162	300	55	1,259	2,704
	Boys..	475	173	137	194	338	125	1,445	
McLean.....	Girls..	1,274	246	197	170	242	40	2,169	4,473
	Boys..	1,409	242	183	179	219	72	2,304	
Menard.....	Girls..	22	8	3	4	10	1	48	115
	Boys..	22	7	9	5	17	7	67	
Mercer.....	Girls..	172	31	41	28	48	14	337	688
	Boys..	290	41	21	41	41	7	351	
Monroe.....	Girls..	153	35	27	23	27	6	271	659
	Boys..	193	43	41	37	61	13	388	
Montgomery.....	Girls..	312	94	61	52	68	12	599	1,242
	Boys..	330	81	72	58	77	25	642	
Morgan.....	Girls..	250	67	55	54	89	22	537	1,088
	Boys..	272	63	53	54	76	33	551	
Moultrie.....	Girls..	111	34	25	24	39	10	243	483
	Boys..	115	31	27	23	29	15	210	
Ogle.....	Girls..	28	2	6	4	19	2	61	106
	Boys..	28	2	3	5	7	.....	45	
Peoria.....	Girls..	852	158	155	130	183	37	1,515	3,097
	Boys..	951	170	127	133	167	31	1,582	
Perry.....	Girls..	19	4	15	11	17	5	71	152
	Boys..	20	12	8	14	17	10	81	
Platt.....	Girls..	215	64	51	61	107	32	536	1,074
	Boys..	214	75	56	64	86	43	538	
Pike.....	Girls..	231	71	51	51	82	20	509	1,019
	Boys..	245	51	61	51	71	31	510	



Table IV.—Continued.

Counties.	Sexes.	AGES.						TOTALS.	
		Under 12 years..	Between 12-13.....	Between 13-14.....	Between 14-15.....	Between 15-16.....	Over 16 years..	Each sex.	All ages.
Lawrence .....	Girls..	206	33	30	26	61	9	365	815
	Boys..	223	35	43	43	66	40	450	
Lee.....	Girls..	424	89	37	25	50	25	650	1,253
	Boys..	376	74	38	39	63	13	603	
Livingston .....	Girls..	589	161	65	49	86	14	964	1,963
	Boys..	609	104	69	65	121	31	999	
Logan.....	Girls..	376	78	47	33	53	10	597	1,240
	Boys..	399	60	49	41	74	20	643	
Macon .....	Girls..	447	78	56	42	62	12	700	1,474
	Boys..	483	68	62	49	88	24	774	
Macoupin.....	Girls..	223	31	30	24	33	7	348	741
	Boys..	247	34	33	25	41	13	393	
Madison.....	Girls..	603	69	52	34	34	17	809	1,722
	Boys..	654	86	69	52	52	.....	913	
Marion .....	Girls..	177	24	27	21	22	17	288	649
	Boys..	230	28	21	19	43	20	361	
Marshall.....	Girls..	163	42	16	11	21	4	257	527
	Boys..	184	21	17	16	26	6	270	
Mason.....	Girls..	197	25	28	24	47	4	325	627
	Boys..	168	28	26	16	54	10	302	
McDonough.....	Girls..	334	111	32	33	45	11	566	1,113
	Boys..	356	46	45	22	67	11	547	
McHenry .....	Girls..	681	92	81	73	115	21	1,043	2,244
	Boys..	654	137	86	80	167	57	1,201	
McLean.....	Girls..	654	137	65	47	78	12	993	2,043
	Boys..	697	106	76	61	90	20	1,050	
Menard .....	Girls..	70	10	12	10	8	.....	110	260
	Boys..	85	16	12	11	18	8	150	
Mercer.....	Girls..	284	62	28	18	41	5	438	915
	Boys..	329	57	18	27	37	9	477	
Monroe.....	Girls..	387	45	18	18	13	5	482	1,111
	Boys..	460	51	36	34	39	5	625	
Montgomery .....	Girls..	560	68	58	43	45	8	782	1,662
	Boys..	609	76	61	50	67	17	880	
Morgan .....	Girls..	401	53	67	40	53	13	627	1,338
	Boys..	444	67	53	40	80	27	711	
Moultrie.....	Girls..	256	33	35	25	31	9	392	855
	Boys..	282	43	43	27	51	17	463	
Ogle .....	Girls..	53	9	7	11	21	7	108	206
	Boys..	64	7	6	4	16	1	98	
Peoria.....	Girls..	816	132	84	66	106	15	1,219	2,532
	Boys..	829	116	86	81	103	28	1,313	
Perry .....	Girls..	134	13	24	15	21	3	210	423
	Boys..	139	21	16	10	20	7	213	
Platt.....	Girls..	421	54	55	53	54	14	651	1,354
	Boys..	434	68	39	40	95	27	703	
Pike.....	Girls..	423	56	56	42	56	14	647	1,410
	Boys..	465	72	71	42	85	28	763	

Table III—Continued.

Counties.	Sexes.	AGES.						TOTALS.	
		Under 12 years..	Between 12-13....	Between 13-14.....	Between 14-15.....	Between 15-18.....	Over 18 years..	Each sex	All ages..
Pope .....	Girls..	15	1	4	1	7	1	29	65
	Boys..	19	6	3	2	3	3	36	
Pulaski .....	Girls..	14	3	5	3	9	2	36	78
	Boys..	14	2	6	6	12	2	42	
Putnam .....	Girls..	53	13	21	17	23	9	136	268
	Boys..	49	11	20	9	27	16	132	
Randolph .....	Girls..	116	28	30	29	41	23	267	580
	Boys..	110	46	35	35	58	29	313	
Rock Island .....	Girls..	614	107	130	106	147	32	1,136	2,320
	Boys..	699	131	94	108	138	14	1,184	
Saline .....	Girls..	38	13	12	11	17	8	99	211
	Boys..	36	14	15	13	23	11	112	
Sangamon .....	Girls..	184	48	47	40	64	16	399	798
	Boys..	199	49	41	39	47	24	399	
Schuyler .....	Girls..	193	43	50	33	67	17	403	836
	Boys..	224	50	41	42	59	17	433	
Scott .....	Girls..	44	6	13	8	21	2	94	200
	Boys..	50	12	10	7	21	6	106	
Shelby .....	Girls..	219	55	64	78	109	33	608	1,094
	Boys..	175	89	65	55	87	65	486	
Stark .....	Girls..	158	31	36	24	35	6	290	592
	Boys..	176	37	24	29	30	6	302	
St. Clair .....	Girls..	928	284	150	102	92	11	1,567	3,400
	Boys..	1,009	257	204	154	172	37	1,833	
Stephenson .....	Girls..	301	81	82	79	133	30	706	1,490
	Boys..	352	88	69	87	139	49	784	
Tazewell .....	Girls..	235	50	41	34	50	8	418	841
	Boys..	261	43	35	33	42	9	423	
Union .....	Girls..	10	6	1	4	9	1	31	66
	Boys..	6	4	.....	5	11	9	35	
Vermilion .....	Girls..	382	105	79	102	153	42	863	1,753
	Boys..	359	121	81	102	153	74	890	
Wabash .....	Girls..	21	13	10	10	19	3	76	160
	Boys..	27	9	16	12	13	7	84	
Warren .....	Girls..	225	45	53	37	63	9	432	900
	Boys..	261	55	35	45	54	18	468	
Washington .....	Girls..	23	6	6	1	4	...	40	96
	Boys..	21	4	4	7	13	7	56	
Wayne .....	Girls..	70	31	32	18	46	21	218	474
	Boys..	74	30	34	30	58	30	256	
White .....	Girls..	72	30	25	21	38	17	203	425
	Boys..	68	26	30	26	51	21	222	
Whiteside .....	Girls..	272	56	58	46	91	11	534	1,132
	Boys..	316	68	44	68	79	23	598	
Will .....	Girls..	776	131	95	74	74	10	1,160	2,377
	Boys..	819	136	105	69	71	17	1,217	
Williamson .....	Girls..	15	13	7	7	16	4	62	114
	Boys..	18	7	6	8	10	3	52	

Table IV.—Continued.

Counties.	Sexes.	AGES.						TOTALS.	
		Under 12 years..	Between 12-13.....	Between 13-14.....	Between 14-15.....	Between 15-18...	Over 18 years..	Each sex.	All ages..
Pope.....	Girls..	146	33	21	24	35	3	262	591
	Boys..	167	33	27	30	52	20	329	
Pulaski.....	Girls..	65	9	3	11	17	4	109	254
	Boys..	94	14	11	11	11	4	145	
Putnam.....	Girls..	107	16	15	13	17	5	173	377
	Boys..	115	19	17	12	34	7	204	
Randolph.....	Girls..	484	59	29	44	59	4	689	1,465
	Boys..	529	73	43	42	73	16	776	
Rock Island.....	Girls..	1,073	124	111	91	152	16	1,567	3,295
	Boys..	1,214	134	103	110	128	39	1,728	
Saline.....	Girls..	219	29	22	25	44	7	356	729
	Boys..	241	36	26	29	36	15	373	
Sangamon.....	Girls..	287	38	46	27	37	9	444	926
	Boys..	395	36	37	29	56	19	482	
Schuyler.....	Girls..	293	68	39	29	39	10	458	978
	Boys..	335	39	28	30	49	19	520	
Scott.....	Girls..	147	22	21	16	31	1	238	433
	Boys..	117	25	12	12	23	6	195	
Shelby.....	Girls..	612	108	85	84	105	21	1,015	2,104
	Boys..	652	102	83	63	126	63	1,089	
Stark.....	Girls..	206	28	19	25	24	6	308	642
	Boys..	231	32	19	20	26	6	334	
St. Clair.....	Girls..	1,027	176	122	85	43	9	2,062	4,375
	Boys..	1,752	201	123	115	109	13	2,313	
Stephenson.....	Girls..	536	71	61	61	91	12	832	1,783
	Boys..	570	93	68	68	114	38	951	
Tazewell.....	Girls..	165	31	16	10	22	5	249	517
	Boys..	176	36	21	15	20	10	268	
Union.....	Girls..	50	10	4	7	16	4	91	197
	Boys..	41	20	12	12	15	6	106	
Vermilion.....	Girls..	641	90	56	72	86	22	967	1,995
	Boys..	662	96	60	56	110	44	1,028	
Wabash.....	Girls..	223	37	27	26	42	3	358	759
	Boys..	232	35	43	31	42	18	401	
Warren.....	Girls..	374	85	38	36	49	12	594	1,214
	Boys..	424	49	37	37	61	12	620	
Washington.....	Girls..	60	8	12	5	8	5	98	270
	Boys..	104	13	9	5	32	9	172	
Wayne.....	Girls..	659	108	86	89	172	54	1,168	2,429
	Boys..	697	123	90	122	153	76	1,261	
White.....	Girls..	510	70	53	62	114	26	835	1,759
	Boys..	546	88	70	79	97	44	924	
Whiteside.....	Girls..	483	109	46	33	79	33	782	1,561
	Boys..	544	62	47	48	62	16	779	
Will.....	Girls..	443	68	48	42	72	18	691	1,414
	Boys..	472	72	51	53	58	11	723	
Williamson.....	Girls..	125	17	22	15	23	8	210	478
	Boys..	154	33	13	20	29	19	268	

Table III—Continued.

Counties,	Sexes.	AGES.						TOTALS.	
		Under 12 years..	Between 12-13....	Between 13-14....	Between 14-15....	Between 15-18....	Over 18 years..	Each sex	All ages..
Winnebago .....	Girls..	185	64	65	63	100	44	521	1,110
	Boys..	265	59	58	48	90	69	589	
Woodford .....	Girls..	189	46	38	31	53	8	365	756
	Boys..	212	44	29	38	53	15	391	
Totals .....	Girls..	24,905	5,816	4,911	4,437	6,734	1,574	48,377	99,582
	Boys..	27,101	5,907	4,618	4,673	6,407	2,499	51,205	
City of Chicago.....	Girls..	13,467	1,979	1,463	1,022	1,089	160	19,180	38,239
	Boys..	14,112	1,921	1,383	929	667	47	19,059	
Totals .....	Girls..	33,372	7,795	6,374	5,459	7,823	1,734	67,557	137,821
	Boys..	41,213	7,828	6,001	5,602	7,074	2,546	70,264	



Table IV.—Continued.

Counties.	Sexes.	AGES.						TOTALS.	
		Under 12 years..	Between 12-13....	Between 13-14.....	Between 14-15....	Between 15-18..	Over 18 years..	Each sex.	All ages.
Winnebago.....	Girls..	677	125	80	92	144	20	1,138	2,597
	Boys..	737	138	118	113	188	75	1,369	
Woodford.....	Girls..	177	35	17	18	23	6	276	575
	Boys..	191	29	23	16	29	11	299	
Totals.....	Girls..	35,692	5,394	3,967	3,591	5,222	1,094	54,960	115,869
	Boys..	38,560	5,747	4,269	3,933	6,286	214	60,909	
City of Chicago.....	Girls..	3,156	469	307	197	278	43	4,450	9,135
	Boys..	3,370	460	316	244	228	37	4,685	
Totals.....	Girls..	38,848	5,863	4,274	3,788	5,500	1,137	59,410	125,004
	Boys..	41,930	6,207	4,615	4,177	6,514	251	65,594	

## VACCINAL STATUS—

PRIOR TO DECEMBER 1, 1881.

V—TABLE showing Number of Scholars returned from each County, as having been Revaccinated prior to December 1, 1881, at given Ages, and of each Sex.

Counties.	Sexes.	AGES.						TOTALS.	
		Under 12 years..	Between 12-13..	Between 13-14...	Between 14-15...	Between 15-18...	Over 18 years..	Each sex.	All ages..
Adams.....	Girls..	22	8	6	1	18		55	97
	Boys..	17	1	5	8	9	2	42	
Alexander.....	Girls..	1						1	1
	Boys..								
Bond.....	Girls..	2	1	1				4	10
	Boys..	2			2	2		6	
Boone.....	Girls..								
	Boys..								
Brown.....	Girls..	2		1		2		5	8
	Boys..	2		1				3	
Bureau.....	Girls..	2						2	3
	Boys..	1						1	
Carroll.....	Girls..								
	Boys..								
Cass.....	Girls..	3	1	1	1	1		7	17
	Boys..	4	1	1	1	3		10	
Champaign.....	Girls..	4	2	7	4	3	2	22	45
	Boys..	6	3	2	2	5	5	23	
Christian.....	Girls..	3		1	2			6	13
	Boys..	2	3	1		1		7	
Clark.....	Girls..								
	Boys..								
Clay.....	Girls..								
	Boys..								
Clinton.....	Girls..								
	Boys..								
Coles.....	Girls..	1		1	1			3	7
	Boys..	1	1	1		1		4	
*Cook.....	Girls..	1,374	241	181	145	164	18	2,123	4,206
	Boys..	1,365	262	187	121	145	3	2,083	
Cumberland.....	Girls..					1		1	2
	Boys..					1		1	
DeKalb.....	Girls..	8	3	1				12	22
	Boys..	6	2	1	1			10	
DeWitt.....	Girls..	2						2	8
	Boys..	2			2	2		6	
Douglas.....	Girls..	1		1	1			3	6
	Boys..	1			1		1	3	
DuPage.....	Girls..	78	14	10	8	9	1	120	239
	Boys..	78	15	11	7	8		119	
Edgar.....	Girls..								
	Boys..								

\*Exclusive of Chicago, which is given separately at foot of Table.

## PUBLIC SCHOLARS.

SUBSEQUENT TO JULY 1, 1881.

VI.—TABLE showing Number of Scholars returned from each County as Revaccinated after December 1, 1881, at given Ages, and of each Sex.

Counties.	Sex.	AGES.						TOTALS.	
		Under 12 years....	Between 12-13.....	Between 13-14.....	Between 14-15.....	Between 15-18.....	Over 18 years....	Each sex.	All ages..
Adams.....	Girls..	262	111	112	105	155	41	786	1,517
	Boys..	290	109	92	95	96	49	731	
Alexander.....	Girls..	77	21	33	20	22	.....	173	294
	Boys..	71	12	10	12	13	.....	121	
Bond.....	Girls..	50	28	22	12	15	5	133	301
	Boys..	39	23	36	26	30	15	168	
Boone.....	Girls..	9	8	7	9	10	4	47	108
	Boys..	18	2	9	4	13	15	61	
Brown.....	Girls..	24	6	13	12	24	5	84	154
	Boys..	26	7	7	10	17	3	70	
Bureau.....	Girls..	131	42	46	43	81	16	339	760
	Boys..	156	46	38	50	84	27	401	
Carroll.....	Girls..	37	10	15	12	16	2	92	188
	Boys..	46	9	10	8	15	8	96	
Cass.....	Girls..	30	6	5	11	15	3	70	144
	Boys..	30	9	14	6	13	2	74	
Champaign.....	Girls..	62	59	36	24	29	98	308	615
	Boys..	88	42	39	39	71	37	307	
Christian.....	Girls..	43	27	20	18	36	7	151	310
	Boys..	46	14	16	17	52	14	159	
Clark.....	Girls..	6	4	7	9	12	3	41	83
	Boys..	9	7	5	5	8	8	42	
Clay.....	Girls..	22	8	9	14	17	5	75	154
	Boys..	28	10	8	8	14	11	79	
Clinton.....	Girls..	25	13	16	11	12	3	80	206
	Boys..	37	14	21	21	26	7	126	
Coles.....	Girls..	94	37	33	26	42	11	243	523
	Boys..	109	25	26	31	73	16	280	
*Cook.....	Girls..	2,504	485	370	266	284	40	3,949	7,823
	Boys..	2,635	459	354	235	179	12	3,874	
Cumberland.....	Girls..	11	5	6	5	4	1	32	59
	Boys..	12	4	2	2	6	1	27	
DeKalb.....	Girls..	53	26	23	26	50	10	188	421
	Boys..	71	25	22	30	56	29	233	
DeWitt.....	Girls..	23	17	11	7	8	15	81	174
	Boys..	24	13	16	11	19	10	93	
Douglas.....	Girls..	21	14	15	17	18	16	101	204
	Boys..	25	16	14	12	23	13	103	
DuPage.....	Girls..	105	36	29	30	34	10	244	522
	Boys..	132	20	34	18	38	36	278	
Edgar.....	Girls..	5	1	5	6	9	3	29	62
	Boys..	8	7	1	1	11	4	33	

\*Exclusive of Chicago, which is given separately at foot of Table.

Table V.—Continued.

Counties.	Sexes.	AGES.						TOTALS.	
		Under 12 years..	Between 12-13...	Between 13-14...	Between 14-15...	Between 15-18...	Over 18 years..	Each sex.	All ages..
Edwards.....	Girls..	2			3			5	10
	Boys..	3	1		1			5	
Effingham.....	Girls..	1						1	1
	Boys..								
Fayette... ..	Girls..	1						1	3
	Boys..	1			1			2	
Ford.....	Girls..	2		2	2	1	1	7	11
	Boys..	2			1			4	
Fulton.....	Girls..	19	9	4	1	2		35	63
	Boys..	15	2	2	5	2	2	28	
Greene.....	Girls..	4	1	1	1	1		8	16
	Boys..	3	2	1	1	1		8	
Grundy.....	Girls..	2	1		3		1	7	18
	Boys..	3	4	2	1	1		11	
Hamilton.....	Girls..								
	Boys..								
Hancock.....	Girls..	7	2	1	2	5		17	43
	Boys..	13	2	4	3	4		26	
Hardin.....	Girls..								
	Boys..								
Henderson.....	Girls..						2	2	2
	Boys..								
Henry.....	Girls..	1			1			2	9
	Boys..	4		2		1		7	
Iroquois.....	Girls..	145	17	64	59	37	27	349	570
	Boys..	145	18	14	34	10		221	
Jackson.....	Girls..								
	Boys..								
Jefferson.....	Girls..								
	Boys..								
Jersey.....	Girls..	2		1	1	1		5	12
	Boys..	2	1	1	1	2		7	
JoDaviess.....	Girls..	1						1	4
	Boys..	1		1		1		3	
Johnson.....	Girls..								
	Boys..								
Kane.....	Girls..	26	8		4	23		61	130
	Boys..	28	11	11	9	8	2	69	
Kankakee.....	Girls..	65	16	31	19	23	8	162	315
	Boys..	73	20	14	11	17	18	153	
Kendall.....	Girls..	23	4	4	2	3		36	70
	Boys..	23	3	3	2	3		34	
Knox.....	Girls..	6	2	1	2	1		12	29
	Boys..	9	1	3	2	2		17	
Lake.....	Girls..	55	11	4	7	22	2	101	207
	Boys..	56	16	14	10	10		106	
LaSalle.....	Girls..	270	68	21	25	28	3	415	786
	Boys..	231	59	29	26	24	2	371	



Table VI.—Continued.

Counties.	Sexes.	AGES.						TOTALS.	
		Under 12 years...	Between 12-13.....	Between 13-14.....	Between 14-15.....	Between 15-16.....	Over 16 years...	Each sex.	All ages..
Edwards.....	Girls..	9	2	1	2	4	4	22	46
	Boys..	11	1	1	3	5	2	21	
Efingham.....	Girls..	3	1		2	11		17	41
	Boys..	5	3	4	3	5	4	24	
Fayette.....	Girls..	18	10	11	12	13	4	68	147
	Boys..	18	11	13	10	15	12	79	
Ford.....	Girls..	23	19	12	8	9	24	95	198
	Boys..	28	14	15	11	22	13	103	
Fulton.....	Girls..	258	97	101	97	158	36	747	1,515
	Boys..	300	99	83	98	132	56	768	
Greene.....	Girls..	13	22	19	17	31	7	139	273
	Boys..	46	16	15	16	31	10	134	
Grundy.....	Girls..	94	26	22	14	28	12	196	404
	Boys..	97	25	27	17	28	14	208	
Hamilton.....	Girls..	2	1	1	1			5	13
	Boys..	1	2	1	1	3		8	
Hancock.....	Girls..	141	54	62	54	83	20	454	901
	Boys..	209	59	48	52	59	20	447	
Hardin.....	Girls..	9	8	3		3	2	25	47
	Boys..	4	3	1	5	6	3	22	
Henderson.....	Girls..	16	12	8	10	15	5	66	164
	Boys..	22	8	9	16	34	9	98	
Henry.....	Girls..	167	43	52	45	77	16	400	833
	Boys..	200	49	41	50	74	19	433	
Iroquois.....	Girls..	296	109	74	50	57	85	671	1,356
	Boys..	324	87	83	60	91	40	685	
Jackson.....	Girls..	21	5	16	14	9	2	67	123
	Boys..	21	6	7	6	10	6	56	
Jefferson.....	Girls..	3	4	4	4	6		21	33
	Boys..	6		1	1	3	1	12	
Jersey.....	Girls..	58	27	18	15	24	3	144	304
	Boys..	64	21	19	18	28	9	160	
JoDavies.....	Girls..	88	21	29	24	34	6	202	413
	Boys..	107	22	21	20	30	11	211	
Johnson.....	Girls..	4	4	1		3	2	14	25
	Boys..	1		1	2	5	2	11	
Kane.....	Girls..	76	32	27	29	46	10	220	476
	Boys..	93	24	28	27	54	30	256	
Kankakee.....	Girls..	152	59	38	26	30	59	364	723
	Boys..	173	45	39	29	50	23	359	
Kendall.....	Girls..	28	14	12	14	16	5	89	198
	Boys..	42	6	14	7	19	21	109	
Knox.....	Girls..	110	37	31	29	50	11	264	551
	Boys..	132	39	27	35	39	11	287	
Lake.....	Girls..	112	33	27	26	43	7	248	515
	Boys..	121	31	26	28	46	15	267	
LaSalle.....	Girls..	431	137	98	71	97	19	853	1,702
	Boys..	459	121	108	60	69	32	849	

Table V.—Continued.

Counties.	Sexes.	AGES.						TOTALS.	
		Under 12 years..	Between 12-13...	Between 13-14...	Between 14-15...	Between 15-18...	Over 18 years..	Each sex.	All ages..
Lawrence .....	Girls..								
	Boys..								
Lee .....	Girls..	31	9	4	7	3		54	134
	Boys..	48	5	13	7			80	
Livingston .....	Girls..	85	23	5	10	33		156	311
	Boys..	79	25	19	16	14	2	155	
Logan.....	Girls..	27	9	4	2	16		58	111
	Boys..	25	5	6	8	8	1	53	
Macon.....	Girls..	21	7	4	1	15	1	49	91
	Boys..	18	3	5	7	7	2	42	
Macoupin .....	Girls..	5	1	1	1	3		11	21
	Boys..	4	1	2	1	2		10	
Madison .....	Girls..	4	1	1	2	2		10	23
	Boys..	2	2	2	3	4		13	
Marion .....	Girls..								
	Boys..								
Marshall.....	Girls..	16	4	1	4	4		28	71
	Boys..	26	3	6	3	4		43	
Mason .....	Girls..				1			1	5
	Boys..		2			1	1	4	
McDonough .....	Girls..	8	4	2		3		17	32
	Boys..	7	1	1	3	2	1	15	
McHenry.....	Girls..	14	4		2	12		32	69
	Boys..	15	6	6	5	3	1	37	
McLean .....	Girls..	306	66	30	34	73	3	512	1,020
	Boys..	296	72	54	42	40	4	508	
Menard.....	Girls..	2				1		3	3
	Boys..								
Mercer .....	Girls..	1			1			2	5
	Boys..	1		1		1		3	
Monroe.....	Girls..								
	Boys..								
Montgomery.....	Girls..	6	2	1	3	4		15	32
	Boys..	4	2	3	4	5		17	
Morgan.....	Girls..	10	3	3	1	7		24	44
	Boys..	8	2	2	3	4	1	20	
Moultrie.....	Girls..	5	1	1	1	3		11	20
	Boys..	4	1	1	1	2		9	
Ogle .....	Girls..								
	Boys..								
Peoria.....	Girls..	92	15	6	30	28	1	172	460
	Boys..	170	17	47	21	32	1	288	
Perry .....	Girls..								
	Boys..								
Piatt.....	Girls..	7	3	4	3	5	1	23	45
	Boys..	8	2	2	3	4	3	22	
Pike .....	Girls..	9	2	2	2	5		20	39
	Boys..	7	3	2	2	4	1	19	

Table VI.—Continued.

Counties.	Sexes.	AGES.						TOTALS.	
		Under 12 years....	Between 12-13.....	Between 13-14.....	Between 14-15.....	Between 15-18.....	Over 18 years....	Each sex.	All ages..
Lawrence .....	Girls..	7	4	5	9	12	7	44	77
	Boys..	6	1	4	1	12	9	33	
Lee.....	Girls..	106	41	23	16	32	9	237	457
	Boys..	123	27	21	17	37	5	220	
Livingston .....	Girls..	206	79	63	61	105	20	534	1,113
	Boys..	226	75	65	62	109	42	579	
Logan.....	Girls..	128	52	47	44	71	16	358	717
	Boys..	141	50	43	43	57	25	359	
Macon .....	Girls..	151	62	60	57	86	21	437	859
	Boys..	167	61	51	52	62	29	422	
Macoupin.....	Girls..	54	25	24	22	35	9	169	332
	Boys..	60	22	20	20	29	12	163	
Madison.....	Girls..	150	75	45	30	45	8	353	751
	Boys..	173	60	45	45	60	15	398	
Marlon.....	Girls..	25	9	16	15	21	5	91	172
	Boys..	24	4	16	5	20	12	81	
Marshall.....	Girls..	62	14	16	12	18	3	129	257
	Boys..	69	15	13	14	15	5	128	
Mason .....	Girls..	13	5	5	5	17	4	49	112
	Boys..	15	4	11	2	25	6	63	
McDonough.....	Girls..	72	26	34	29	42	8	210	420
	Boys..	84	30	24	25	34	12	210	
McHenry.....	Girls..	118	64	57	68	134	26	467	1,019
	Boys..	139	64	54	78	158	59	552	
McLean .....	Girls..	550	150	114	96	142	22	1,074	2,183
	Boys..	589	135	114	94	133	44	1,109	
Menard.....	Girls..	7	2	1	.....	7	1	18	44
	Boys..	3	2	5	3	9	4	26	
Mercer .....	Girls..	64	16	23	16	29	6	154	321
	Boys..	87	19	16	16	26	3	167	
Monroe.....	Girls..	123	34	27	22	26	6	238	586
	Boys..	166	38	38	36	58	12	348	
Montgomery .....	Girls..	146	69	48	42	56	11	372	766
	Boys..	169	55	44	46	61	19	394	
Morgan.....	Girls..	110	55	48	48	76	22	359	688
	Boys..	124	48	41	41	55	20	329	
Moultrie .....	Girls..	32	16	14	14	22	6	104	200
	Boys..	38	11	12	13	16	6	96	
Ogle.....	Girls..	14	2	5	4	19	2	46	76
	Boys..	15	1	3	4	7	.....	30	
Peoria .....	Girls..	367	88	88	71	110	29	744	1,517
	Boys..	413	91	75	72	98	24	773	
Perry.....	Girls..	14	3	10	10	14	5	56	117
	Boys..	14	10	6	10	14	7	61	
Piatt.....	Girls..	66	38	33	28	39	43	247	475
	Boys..	82	32	29	24	42	19	228	
Pike.....	Girls..	100	50	44	43	68	19	324	622
	Boys..	112	37	37	37	56	19	298	





Table VI.—Continued.

Counties.	Sexes.	AGES.						TOTALS.	
		Under 12 years...	Between 12-13.....	Between 13-14.....	Between 14-15.....	Between 15-18.....	Over 18 years....	Each sex.	All ages.
Pope.....	Girls..	2	3	2	1	5	1	11	27
	Boys..	3	3	1	1	6	2	16	
Pulaski.....	Girls..	10	2	4	3	6	1	26	53
	Boys..	7	2	3	5	8	2	27	
Putnam.....	Girls..	25	9	14	11	20	7	86	173
	Boys..	26	8	14	7	20	12	87	
Randolph.....	Girls..	68	23	19	27	27	15	179	380
	Boys..	72	30	24	22	34	19	201	
Rock Island.....	Girls..	256	52	72	56	91	18	545	1,115
	Boys..	305	65	51	60	76	13	570	
Saline.....	Girls..	20	7	8	6	11	5	57	125
	Boys..	21	9	9	8	14	7	68	
Sangamon.....	Girls..	81	41	37	36	50	14	259	509
	Boys..	96	35	31	31	41	16	250	
Schuyler.....	Girls..	77	25	33	25	37	12	209	411
	Boys..	90	29	25	21	29	8	202	
Scott.....	Girls..	13	1	10	4	17	1	46	101
	Boys..	15	7	5	6	16	6	55	
Shelby.....	Girls..	54	35	39	44	59	15	246	488
	Boys..	73	33	29	29	44	34	242	
Stark.....	Girls..	70	14	16	12	23	6	141	288
	Boys..	78	18	14	14	20	3	147	
St. Clair.....	Girls..	453	218	111	89	83	8	962	2,071
	Boys..	527	161	119	122	147	33	1,109	
Stephenson.....	Girls..	102	35	39	38	66	12	292	619
	Boys..	123	36	32	38	71	27	327	
Tazewell.....	Girls..	98	29	24	21	29	4	205	410
	Boys..	110	26	20	16	25	8	205	
Union.....	Girls..	10	6	1	4	9	1	31	64
	Boys..	6	3	.....	5	10	9	33	
Vermilion.....	Girls..	109	60	40	27	31	78	345	692
	Boys..	131	46	43	32	64	31	347	
Wabash.....	Girls..	19	13	10	9	17	3	71	147
	Boys..	22	9	16	10	13	6	76	
Warren.....	Girls..	74	18	21	19	32	7	171	354
	Boys..	92	21	18	17	25	7	183	
Washington.....	Girls..	5	4	3	.....	4	.....	16	38
	Boys..	1	1	3	3	8	6	22	
Wayne.....	Girls..	34	15	15	8	24	10	106	226
	Boys..	33	14	18	13	27	15	120	
White.....	Girls..	35	16	15	9	23	9	107	231
	Boys..	37	17	18	13	25	14	124	
Whiteside.....	Girls..	127	28	32	26	43	6	279	546
	Boys..	148	32	23	28	44	7	267	
Will.....	Girls..	395	94	72	50	74	20	705	1,420
	Boys..	412	84	75	53	67	24	715	
Williamson.....	Girls..	5	8	5	1	9	1	29	50
	Boys..	8	2	2	3	5	1	21	

Table V.—Continued.

Counties.	Sexes.	AGES.						TOTALS.	
		Under 12 years..	Between 12-13...	Between 13-14...	Between 14-15...	Between 15-18...	Over 18 years..	Each sex.	All ages..
Winnebago .....	Girls..	2	.....	.....	1	2	.....	5	16
	Boys..	6	1	2	1	1	.....	11	
Woodford .....	Girls..	22	5	1	5	9	.....	42	98
	Boys..	30	6	8	5	6	1	56	
Totals .....	Girls..	3,058	630	466	512	637	95	5,400	10,873
	Boys..	3,189	687	583	451	494	71	5,473	
City of Chicago .....	Girls..	4,070	710	533	430	489	92	6,324	12,477
	Boys..	4,056	770	559	350	399	19	6,153	
Totals .....	Girls..	7,128	1,340	999	942	1,126	187	11,724	23,350
	Boys..	7,245	1,457	1,142	801	893	90	11,626	

Table VI.—Continued.

Counties.	Sexes.	AGES.						TOTALS.	
		Under 12 years....	Between 12-13.....	Between 13-14.....	Between 14-15.....	Between 15-16.....	Over 18 years....	Each sex.	All ages..
Winnebago.....	Girls..	60	32	31	36	49	14	232	491
	Boys..	90	19	31	25	58	44	269	
Woodford.....	Girls..	71	21	19	17	28	3	156	334
	Boys..	78	24	17	20	26	10	178	
Totals.....	Girls..	10,723	3,532	3,049	2,586	3,822	1,195	24,907	50,806
	Boys..	12,075	3,196	2,837	2,560	3,835	1,456	25,959	
City of Chicago.....	Girls..	7,464	1,440	1,074	789	846	114	11,727	23,230
	Boys..	7,884	1,340	1,034	684	528	33	11,503	
Totals.....	Girls..	18,187	4,972	4,123	3,375	4,668	1,309	36,634	74,096
	Boys..	19,959	4,536	3,871	3,244	4,363	1,489	37,462	

## VACCINAL STATUS—

PRIOR TO DECEMBER 1, 1881.

VII.—TABLE showing Number of Scholars returned from each County as Protected by Vaccination or Revaccination prior to December 1, 1881, at given Ages, and of each Sex.

Counties.	Sexes.	AGES.						TOTALS.	
		Under 12 years ...	Between 12-13.....	Between 13-14.....	Between 14-15.....	Between 15-18.....	Over 18 years ...	Each sex.	All ages..
Adams.....	Girls..	569	158	141	122	211	45	1,246	2,442
	Boys..	588	140	126	133	145	64	1,196	
Alexander.....	Girls..	122	24	40	24	32	1	243	421
	Boys..	114	21	15	15	13	.....	178	
Bond.....	Girls..	119	55	27	10	17	17	245	514
	Boys..	132	36	35	15	39	12	269	
Boone.....	Girls..	26	12	11	11	19	11	90	199
	Boys..	49	9	11	6	15	19	109	
Brown.....	Girls..	68	16	19	14	35	10	162	334
	Boys..	70	17	23	19	34	9	172	
Bureau.....	Girls..	382	107	88	94	169	34	874	1,818
	Boys..	441	110	49	115	144	85	944	
Carroll.....	Girls..	87	18	20	18	26	10	179	376
	Boys..	111	19	16	16	24	11	197	
Cass.....	Girls..	132	30	21	34	38	3	258	545
	Boys..	134	33	41	26	44	9	287	
Champaign.....	Girls..	379	137	115	168	255	74	1,128	2,285
	Boys..	321	170	107	167	256	136	1,157	
Christian.....	Girls..	140	49	27	31	49	9	305	639
	Boys..	139	31	44	26	74	20	334	
Clark.....	Girls..	39	8	14	20	25	8	114	217
	Boys..	16	22	12	13	22	18	103	
Clay.....	Girls..	68	13	16	24	34	10	165	338
	Boys..	65	26	18	17	27	20	173	
Clinton.....	Girls..	42	14	16	16	17	3	108	297
	Boys..	73	21	26	29	33	7	189	
Coles.....	Girls..	185	56	33	33	48	8	363	808
	Boys..	202	41	49	40	89	24	445	
*Cook.....	Girls..	5,890	907	666	486	529	70	8,548	17,063
	Boys..	6,109	912	659	459	379	17	8,515	
Cumberland.....	Girls..	19	6	9	6	5	1	46	90
	Boys..	22	7	2	3	7	3	44	
DeKalb.....	Girls..	195	68	55	58	117	20	513	1,089
	Boys..	232	69	44	74	109	48	576	
DeWitt.....	Girls..	87	35	21	20	31	14	208	432
	Boys..	86	31	25	23	41	18	224	
Douglas.....	Girls..	97	31	30	37	51	16	262	513
	Boys..	71	41	31	26	50	32	251	
DuPage.....	Girls..	288	63	53	46	61	29	540	1,113
	Boys..	345	59	53	31	46	39	573	
Edgar.....	Girls..	8	2	5	7	9	3	34	76
	Boys..	10	10	3	2	12	5	42	

\*Exclusive of Chicago—given separately at foot of Table.



## PUBLIC SCHOLARS.

SUBSEQUENT TO DECEMBER 31, 1881.

VIII.—TABLE showing Number of Scholars returned from each County as Protected by Vaccination or Revaccination after December 1, 1881, at given Ages, and of each Sex.

Counties.	Sexes.	AGES.						TOTALS.	
		Under 12 years	Between 12-13.....	Between 13-14.....	Between 14-15. ....	Between 15-18.....	Over 18 years	Each sex.	All ages.
Adams.....	Girls..	1,046	223	214	182	263	64	1,992	4,081
	Boys..	1,148	224	197	183	248	91	2,091	
Alexander.....	Girls..	250	41	67	32	39	2	431	818
	Boys..	276	43	23	26	19	.....	387	
Bond.....	Girls..	403	70	57	45	69	25	669	1,433
	Boys..	426	83	71	68	82	34	764	
Boone.....	Girls..	289	79	43	58	83	13	565	1,274
	Boys..	329	70	75	64	115	56	709	
Brown.....	Girls..	138	23	31	29	48	12	281	582
	Boys..	156	24	27	24	52	18	301	
Bureau.....	Girls..	656	552	70	56	120	6	1,266	2,668
	Boys..	823	91	58	61	156	34	1,492	
Carroll.....	Girls..	305	50	45	47	71	8	526	1,162
	Boys..	362	54	54	53	82	31	636	
Cass.....	Girls..	150	31	21	25	36	8	271	609
	Boys..	159	43	32	28	59	17	338	
Champaign.....	Girls..	1,193	215	131	180	197	142	2,058	4,199
	Boys..	1,211	210	157	127	312	134	2,141	
Christian.....	Girls..	587	101	96	100	141	26	1,051	2,216
	Boys..	672	108	108	87	137	53	1,165	
Clark.....	Girls..	217	43	33	48	52	13	406	828
	Boys..	220	50	27	31	59	32	422	
Clay.....	Girls..	305	52	40	55	69	15	536	1,200
	Boys..	352	73	50	60	87	42	664	
Clinton.....	Girls..	155	21	28	20	35	4	263	655
	Boys..	219	30	43	39	51	10	392	
Coles.....	Girls..	668	109	87	79	109	29	1,072	2,319
	Boys..	773	115	98	85	142	34	1,247	
*Cook.....	Girls..	3,561	644	466	330	380	51	5,435	10,902
	Boys..	3,781	617	472	316	257	24	5,467	
Cumberland.....	Girls..	104	25	14	15	22	1	181	345
	Boys..	98	20	11	12	16	7	164	
DeKalb.....	Girls..	314	168	52	49	88	31	681	1,458
	Boys..	400	70	50	53	117	36	777	
DeWitt.....	Girls..	272	49	33	37	45	27	463	970
	Boys..	286	53	39	37	64	28	507	
Douglas.....	Girls..	403	65	65	67	82	29	712	1,475
	Boys..	419	92	52	50	112	38	763	
DuPage.....	Girls..	394	92	59	61	81	17	704	1,519
	Boys..	450	75	82	57	94	57	815	
Edgar.....	Girls..	120	20	18	21	35	10	224	496
	Boys..	139	33	20	21	34	22	272	

\*Exclusive of Chicago, which is given separately at foot of Table.

Table VII.—Continued.

Counties.	Sexes.	AGES.						TOTALS.	
		Under 12 years ...	Between 12-13.....	Between 13-14.....	Between 14-15.....	Between 15-18.....	Over 18 years ...	Each sex.	All ages.
Edwards.....	Girls..	35	12	12	18	19	15	111	214
	Boys..	21	19	13	13	20	17	103	
Effingham.....	Girls..	7	3	-----	4	13	-----	27	60
	Boys..	7	6	6	3	7	4	33	
Fayette.....	Girls..	59	23	14	17	21	13	147	295
	Boys..	51	26	20	13	23	15	148	
Ford.....	Girls..	110	42	31	37	56	20	295	596
	Boys..	101	43	30	37	60	29	301	
Fulton.....	Girls..	646	178	150	147	251	55	1,427	2,895
	Boys..	704	169	119	172	199	105	1,468	
Greene.....	Girls..	108	34	24	24	38	8	236	478
	Boys..	110	26	29	23	41	13	242	
Grundy.....	Girls..	213	42	29	28	24	4	340	713
	Boys..	225	49	37	24	29	9	373	
Hamilton.....	Girls..	8	5	2	2	3	1	21	32
	Boys..	3	1	1	1	3	2	11	
Hancock.....	Girls..	396	88	90	78	119	25	816	1,604
	Boys..	438	91	77	81	96	25	788	
Hardin.....	Girls..	9	8	4	1	3	2	27	50
	Boys..	5	3	1	5	6	3	23	
Henderson.....	Girls..	102	21	23	24	37	7	214	494
	Boys..	113	29	28	22	64	24	280	
Henry.....	Girls..	442	99	100	88	145	32	906	1,868
	Boys..	508	110	65	104	129	46	962	
Iroquois.....	Girls..	854	179	178	176	196	78	1,661	3,227
	Boys..	862	183	134	151	169	67	1,566	
Jackson.....	Girls..	25	5	16	14	10	2	72	137
	Boys..	24	9	8	7	11	6	68	
Jefferson.....	Girls..	6	5	4	4	8	-----	27	43
	Boys..	9	-----	2	1	3	1	16	
Jersey.....	Girls..	123	40	26	21	31	5	246	515
	Boys..	134	31	31	26	37	10	269	
JoDavies.....	Girls..	209	37	47	37	55	17	402	841
	Boys..	254	47	33	36	54	15	439	
Johnson.....	Girls..	4	5	1	-----	3	2	15	31
	Boys..	2	1	4	1	5	2	16	
Kane.....	Girls..	229	67	54	57	110	27	544	1,150
	Boys..	274	69	61	60	92	50	606	
Kankakee.....	Girls..	454	100	95	94	128	35	906	1,814
	Boys..	456	114	77	84	114	63	908	
Kendall.....	Girls..	86	24	22	19	29	16	196	409
	Boys..	115	20	21	12	22	23	213	
Knox.....	Girls..	427	90	106	74	141	18	856	1,783
	Boys..	501	106	71	90	124	35	927	
Lake.....	Girls..	339	74	56	54	98	15	636	1,315
	Boys..	358	79	62	64	88	28	679	
LaSalle.....	Girls..	1,373	282	191	169	227	47	2,289	4,718
	Boys..	1,587	266	184	166	179	47	2,429	

Table VIII.—Continued.

Counties.	Sexes.	AGES.						TOTALS.	
		Under 12 years...	Between 12-13.....	Between 13-15.....	Between 14-15.....	Between 15-18.....	Over 18 years....	Each sex.	All ages..
Edwards.....	Girls..	269	32	21	32	58	19	431	880
	Boys..	278	41	22	26	60	22	449	
Eflingham.....	Girls..	143	16	18	21	33	8	239	542
	Boys..	153	23	32	16	35	14	273	
Fayette.....	Girls..	261	42	36	43	54	20	456	957
	Boys..	271	51	36	43	64	36	501	
Ford.....	Girls..	342	61	39	49	57	38	586	1,212
	Boys..	355	64	43	41	85	38	626	
Fulton.....	Girls..	1,154	589	195	154	244	36	2,270	4,679
	Boys..	1,345	270	204	152	258	78	2,409	
Greene.....	Girls..	287	55	52	45	69	14	522	1,087
	Boys..	318	54	52	44	73	24	565	
Grundy.....	Girls..	329	57	52	44	87	29	598	1,219
	Boys..	337	65	70	57	78	14	621	
Hamilton.....	Girls..	50	9	9	7	11	7	93	195
	Boys..	50	15	7	9	15	6	102	
Hancock.....	Girls..	788	132	136	110	167	34	1,367	2,843
	Boys..	889	141	122	122	155	47	1,476	
Hardin.....	Girls..	103	16	15	17	20	6	177	390
	Boys..	102	23	21	17	32	18	213	
Henderson.....	Girls..	136	35	28	35	43	14	291	665
	Boys..	178	33	20	42	78	23	374	
Henry.....	Girls..	840	387	106	84	154	16	1,481	3,108
	Boys..	1,018	123	87	96	161	36	1,627	
Iroquois.....	Girls..	974	206	134	112	138	106	1,670	3,429
	Boys..	1,043	191	154	118	182	71	1,759	
Jackson.....	Girls..	182	27	31	29	28	4	301	637
	Boys..	180	34	32	30	40	20	336	
Jefferson.....	Girls..	79	17	21	13	29	2	161	345
	Boys..	94	14	17	16	28	15	184	
Jersey.....	Girls..	308	57	41	39	47	11	502	1,061
	Boys..	334	59	49	40	59	17	559	
JoDaviess.....	Girls..	569	85	80	75	116	14	939	2,017
	Boys..	665	91	81	84	107	40	1,078	
Johnson.....	Girls..	200	34	28	21	51	16	350	755
	Boys..	207	36	35	50	65	32	405	
Kane.....	Girls..	365	79	59	60	93	18	674	1,448
	Boys..	391	80	70	63	118	52	774	
Kankakee.....	Girls..	523	112	71	62	74	69	911	1,852
	Boys..	562	100	76	60	102	41	941	
Kendall.....	Girls..	233	59	35	43	60	11	441	973
	Boys..	269	49	54	42	74	44	532	
Knox.....	Girls..	773	254	104	73	132	33	1,369	2,761
	Boys..	890	127	99	92	151	33	1,392	
Lake.....	Girls..	292	59	46	41	64	11	513	1,077
	Boys..	308	62	49	47	74	24	564	
LaSalle.....	Girls..	1,196	428	168	108	186	31	2,057	4,074
	Boys..	1,237	237	181	130	182	50	2,017	

Table VII.—Continued.

Counties.	Sexes.	AGES.						TOTALS.	
		Under 12 years...	Between 12-13....	Between 13-14....	Between 14-15....	Between 15-18....	Over 18 years...	Each sex.	All ages.
Lawrence .....	Girls..	8	4	5	10	12	7	46	84
	Boys..	6	2	5	2	14	9	38	
Lee.....	Girls..	241	65	52	55	89	19	512	1,087
	Boys..	285	63	51	64	83	29	575	
Livingston .....	Girls..	691	183	143	148	253	41	1,459	3,067
	Boys..	796	185	143	165	234	85	1,608	
Logan .....	Girls..	343	93	80	73	129	24	742	1,507
	Boys..	377	87	73	84	104	40	765	
Macon .....	Girls..	361	101	88	77	137	28	792	1,584
	Boys..	386	92	80	88	105	43	792	
Macoupin .....	Girls..	127	37	30	29	46	10	279	554
	Boys..	129	31	32	28	41	14	275	
Madison .....	Girls..	314	100	63	39	51	12	639	1,258
	Boys..	347	88	76	65	78	25	629	
Marion .....	Girls..	51	16	23	20	35	7	152	308
	Boys..	62	15	26	11	25	17	156	
Marshall .....	Girls..	169	38	30	26	34	7	303	638
	Boys..	207	31	30	29	32	5	335	
Mason .....	Girls..	74	17	15	13	23	7	149	311
	Boys..	69	18	21	7	38	9	162	
McDonough.....	Girls..	230	66	54	43	94	21	513	1,039
	Boys..	260	59	41	64	71	31	526	
McHenry .....	Girls..	442	169	149	164	312	55	1,291	2,773
	Boys..	490	179	143	199	342	129	1,482	
McLean .....	Girls..	1,580	312	227	204	315	43	2,681	5,493
	Boys..	1,705	314	237	221	259	76	2,812	
Menard.....	Girls..	24	8	3	4	11	1	51	118
	Boys..	22	7	9	5	17	7	67	
Mercer .....	Girls..	173	34	41	29	48	14	339	693
	Boys..	201	41	22	41	42	7	354	
Monroe.....	Girls..	153	35	27	23	27	6	271	659
	Boys..	193	43	41	37	61	13	338	
Montgomery .....	Girls..	318	95	62	55	72	12	614	1,274
	Boys..	334	83	75	61	82	25	660	
Morgan.....	Girls..	260	70	58	55	96	22	561	1,132
	Boys..	280	65	55	57	80	34	571	
Moultrie.....	Girls..	116	35	26	25	42	10	254	503
	Boys..	119	32	28	24	31	15	249	
Ogle .....	Girls..	28	2	6	4	19	2	61	106
	Boys..	23	2	3	5	7	.....	45	
Peoria.....	Girls..	944	173	161	160	211	38	1,637	3,557
	Boys..	1,121	187	174	154	199	35	1,870	
Perry .....	Girls..	19	4	15	11	17	5	71	152
	Boys..	20	12	8	14	17	10	81	
Piatt.....	Girls..	222	67	58	67	112	33	559	1,119
	Boys..	222	77	58	67	90	46	560	
Pike .....	Girls..	243	73	53	53	87	20	529	1,058
	Boys..	252	54	63	53	75	32	529	



Table VIII.—Continued.

Counties.	Sexes.	AGES.						TOTALS.	
		Under 12 years...	Between 12-13....	Between 13-14....	Between 14-15....	Between 15-18....	Over 18 years....	Each sex.	All ages.
Lawrence .....	Girls..	213	37	35	35	73	16	409	892
	Boys..	220	36	47	44	78	49	483	
Lee .....	Girls..	530	130	60	41	82	34	887	1,710
	Boys..	499	101	59	56	100	18	823	
Livingston .....	Girls..	795	240	128	110	191	34	1,498	3,076
	Boys..	835	179	134	127	230	73	1,578	
Logan .....	Girls..	504	130	94	77	124	26	955	1,957
	Boys..	540	110	92	84	131	45	1,002	
Macon .....	Girls..	598	140	119	90	148	33	1,137	2,333
	Boys..	650	129	113	101	150	53	1,196	
Macoupin .....	Girls..	277	56	54	46	68	16	517	1,073
	Boys..	307	56	53	45	70	25	556	
Madison .....	Girls..	753	144	97	64	79	25	1,162	2,473
	Boys..	827	146	114	97	112	15	1,311	
Marion .....	Girls..	202	33	43	36	43	22	379	821
	Boys..	254	32	37	24	63	32	442	
Marshall .....	Girls..	225	60	32	21	39	9	386	784
	Boys..	253	36	30	29	41	9	398	
Mason .....	Girls..	210	30	33	29	64	8	374	739
	Boys..	183	32	37	18	79	16	365	
McDonough.....	Girls..	405	146	66	57	83	19	776	1,533
	Boys..	440	76	73	48	96	24	757	
McHenry .....	Girls..	799	156	138	144	249	47	1,510	3,263
	Boys..	793	201	140	158	325	116	1,753	
McLean .....	Girls..	1,204	287	179	143	220	34	2,067	4,226
	Boys..	1,286	241	190	155	223	64	2,159	
Menard .....	Girls..	77	12	13	10	15	1	128	304
	Boys..	88	18	17	14	27	12	176	
Mercer .....	Girls..	348	98	51	34	70	11	592	1,236
	Boys..	416	56	34	43	63	12	644	
Monroe .....	Girls..	510	79	45	40	39	11	724	1,697
	Boys..	626	89	74	70	97	17	973	
Montgomery.....	Girls..	706	137	106	85	101	19	1,154	2,428
	Boys..	778	131	105	96	128	36	1,274	
Morgan .....	Girls..	511	108	115	88	129	35	986	2,026
	Boys..	568	115	94	81	135	47	1,040	
Moultrie.....	Girls..	288	49	49	39	56	15	496	1,055
	Boys..	320	54	55	40	67	23	559	
Ogle .....	Girls..	67	11	12	15	40	9	154	282
	Boys..	79	8	9	8	23	1	128	
Peoria .....	Girls..	1,183	220	172	137	216	35	1,963	4,049
	Boys..	1,312	207	161	153	201	52	2,086	
Perry .....	Girls..	148	16	34	25	35	8	266	540
	Boys..	153	31	22	20	34	14	274	
Platt .....	Girls..	487	92	88	81	93	57	898	1,829
	Boys..	516	100	68	64	137	46	931	
Pike .....	Girls..	523	106	100	85	124	33	971	2,082
	Boys..	577	109	108	79	141	47	1,061	

Table VII.—Continued.

Counties.	Sexes.	AGES.						TOTALS.	
		Under 12 years...	Between 12-13 .....	Between 13-14 .....	Between 14-15 .....	Between 15-18 .....	Over 18 years...	Each sex.	All sexes.
Pope .....	Girls..	15	1	4	1	7	1	29	65
	Boys..	19	6	3	2	3	3	36	
Pulaski .....	Girls..	14	3	5	3	9	12	36	78
	Boys..	14	2	6	6	12	12	42	
Putnam .....	Girls..	53	13	21	17	23	9	136	268
	Boys..	49	11	20	9	27	16	132	
Randolph.....	Girls..	118	28	30	32	41	23	272	590
	Boys..	113	47	35	36	58	29	318	
Rock Island.....	Girls..	616	107	130	108	148	32	1,141	2,340
	Boys..	708	131	97	109	140	14	1,199	
Saline.....	Girls..	38	13	12	13	17	8	100	213
	Boys..	37	14	15	13	24	11	113	
Sangamon .....	Girls..	192	50	49	41	69	16	417	831
	Boys..	205	50	43	41	50	25	414	
Schuyler .....	Girls..	198	45	51	34	70	17	415	861
	Boys..	231	50	43	44	61	17	446	
Scott.....	Girls..	46	7	14	8	22	2	99	211
	Boys..	51	12	10	7	25	7	112	
Shelby .....	Girls..	226	57	66	79	114	33	625	1,124
	Boys..	180	90	66	57	90	66	499	
Stark .....	Girls..	164	32	36	28	38	6	304	645
	Boys..	206	38	30	32	35	6	341	
St. Clair .....	Girls..	932	285	151	105	95	11	1,579	3,430
	Boys..	1,012	259	207	158	178	37	1,851	
Stephenson .....	Girls..	305	87	82	80	136	30	720	1,518
	Boys..	359	89	72	88	141	49	798	
Tazewell .....	Girls..	276	58	44	42	61	8	489	1,004
	Boys..	315	53	46	43	49	9	515	
Union .....	Girls..	10	6	1	4	9	1	31	66
	Boys..	6	4	.....	5	11	9	35	
Vermilion .....	Girls..	421	113	108	125	169	53	989	1,979
	Boys..	403	131	88	113	167	88	990	
Wabash.....	Girls..	22	13	10	10	19	3	77	163
	Boys..	28	9	16	13	13	7	86	
Warren .....	Girls..	227	45	53	38	63	9	435	911
	Boys..	266	55	36	46	55	18	476	
Washington.....	Girls..	23	6	6	1	4	.....	40	97
	Boys..	22	4	4	7	13	7	57	
Wayne .....	Girls..	70	31	32	18	46	21	218	474
	Boys..	74	30	34	30	58	30	256	
White .....	Girls..	73	30	25	21	38	17	204	428
	Boys..	69	26	31	26	55	24	224	
Whiteside .....	Girls..	286	60	60	53	94	11	564	1,220
	Boys..	351	70	55	72	85	23	656	
Will.....	Girls..	888	159	105	124	84	25	1,385	2,880
	Boys..	944	207	144	90	93	17	1,495	
Williamson.....	Girls..	15	13	7	7	16	4	62	114
	Boys..	18	7	6	8	10	3	52	

Table VIII.—Continued.

Counties.	Sexes.	AGES.						TOTALS.	
		Under 12 years.	Between 12-13.....	Between 13-14.....	Between 14-15.....	Between 15-16.....	Over 16 years.	Each sex.	All ages.
Pope.....	Girls..	148	33	23	25	40	4	273	618
	Boys..	170	36	28	31	58	32	345	
Pulaski.....	Girls..	75	11	7	14	23	5	135	307
	Boys..	101	16	14	16	19	6	172	
Putnam.....	Girls..	132	25	20	24	37	12	250	550
	Boys..	141	27	31	19	54	19	291	
Randolph.....	Girls..	552	82	48	71	86	20	869	1,845
	Boys..	601	103	67	64	109	35	977	
Rock Island.....	Girls..	1,329	176	183	147	243	34	2,112	4,410
	Boys..	1,519	199	154	170	204	52	2,298	
Saline.....	Girls..	239	36	30	31	55	12	413	854
	Boys..	262	45	35	37	50	22	441	
Sangamon.....	Girls..	368	79	83	63	87	23	703	1,435
	Boys..	401	71	68	60	97	35	732	
Schuyler.....	Girls..	370	93	72	54	76	22	667	1,389
	Boys..	425	68	53	51	78	27	722	
Scott.....	Girls..	160	23	31	20	48	2	284	534
	Boys..	132	32	17	18	39	12	250	
Shelby.....	Girls..	666	143	124	128	164	54	1,261	2,592
	Boys..	725	135	112	92	170	129	1,331	
Stark.....	Girls..	276	42	35	37	47	12	449	930
	Boys..	309	50	33	34	46	9	481	
St. Clair.....	Girls..	2,080	394	233	174	126	17	3,024	6,446
	Boys..	2,279	362	242	237	256	46	3,422	
Stephenson.....	Girls..	638	106	100	99	157	24	1,124	2,402
	Boys..	693	129	100	106	185	68	1,278	
Tazewell.....	Girls..	263	60	40	31	51	9	454	927
	Boys..	286	52	41	31	45	18	473	
Union.....	Girls..	60	16	5	11	25	5	122	261
	Boys..	47	23	12	17	25	15	139	
Vermilion.....	Girls..	759	150	96	99	117	100	1,312	2,687
	Boys..	793	142	103	88	174	75	1,375	
Wabash.....	Girls..	242	50	37	35	59	6	429	906
	Boys..	254	44	59	41	55	24	477	
Warren.....	Girls..	448	106	62	54	77	20	767	1,568
	Boys..	516	70	56	55	86	18	801	
Washington.....	Girls..	65	12	15	5	12	5	114	308
	Boys..	105	14	12	8	40	15	194	
Wayne.....	Girls..	693	123	101	97	196	64	1,274	2,655
	Boys..	750	137	108	135	180	91	1,381	
White.....	Girls..	545	86	68	71	137	35	942	1,990
	Boys..	583	105	88	92	122	58	1,048	
Whiteside.....	Girls..	610	147	78	60	122	44	1,061	2,107
	Boys..	693	93	70	69	100	21	1,046	
Will.....	Girls..	838	162	120	92	116	38	1,366	2,834
	Boys..	884	156	132	106	125	35	1,438	
Williamson.....	Girls..	130	25	27	16	32	9	239	528
	Boys..	162	35	15	23	34	20	289	

Table VII.—Continued.

Counties.	Sexes.	AGES.						TOTALS.	
		Under 12 years...	Between 12-13...	Between 13-14....	Between 14-15....	Between 15-18....	Over 18 years...	Each sex.	All ages..
Winnebago .....	Girls..	187	64	65	64	102	44	526	1,126
	Boys..	271	60	60	49	91	69	600	
Woodford .....	Girls..	211	51	39	36	62	8	407	854
	Boys..	242	50	37	43	59	16	447	
Totals.....	Girls..	27,963	6,446	5,377	4,949	7,371	1,669	53,775	10,455
	Boys..	30,290	6,594	5,201	5,124	6,901	2,570	56,680	
City of Chicago.....	Girls..	17,537	2,689	1,996	1,452	1,578	252	25,504	50,716
	Boys..	18,168	2,691	1,942	1,279	1,066	66	25,212	
Totals.....	Girls..	45,500	9,135	7,373	6,401	8,949	1,921	79,279	161,171
	Boys..	48,458	9,285	7,143	6,403	7,967	2,636	81,892	



Table VIII.—Continued.

Counties.	Sexes.	AGES.						TOTALS.	
		Under 12 years...	Between 12-13.....	Between 13-14.....	Between 14-15.....	Between 15-18.....	Over 18 years...	Each sex.	All ages.
Winnebago .....	Girls..	737	157	111	128	193	34	1,360	2,998
	Boys..	827	157	151	138	246	119	1,638	
Woodford .....	Girls..	248	56	36	35	51	9	432	909
	Boys..	269	53	40	36	55	21	477	
Totals .....	Girls..	46,415	8,926	7,916	6,177	9,044	2,289	79,867	166,735
	Boys..	50,635	8,943	7,106	6,493	10,121	1,670	86,868	
City of Chicago.....	Girls..	10,620	1,909	1,381	986	1,124	157	16,177	32,365
	Boys..	11,251	1,800	1,380	928	756	70	16,188	
Totals .....	Girls..	57,035	10,835	8,397	7,163	10,168	2,446	96,044	199,100
	Boys..	61,889	10,743	8,486	7,421	10,877	1,740	103,056	

IX.—TABLE showing Results of Primary Vaccinations with

Counties.	UNDER 8 YEARS.				8 TO 10 YEARS.				10 TO 12 YEARS.				12 TO 13 YEARS.			
	Total	Result.			Total	Result.			Total	Result.			Total	Result.		
		T	M	B		T	M	B		T	M	B		T	M	B
Adams—																
Bovine .....	596	496	36	64	683	569	41	73	596	472	48	76	240	184	34	22
Humanized .....	67	57	6	4	74	62	7	5	59	48	11	...	36	32	2	2
Totals .....	663	553	42	68	757	631	48	78	655	520	59	76	276	216	36	24
Alexander—																
Bovine .....	129	112	10	7	140	118	10	12	58	49	1	8	58	49	1	8
Humanized .....	4	2	...	2	21	20	...	1	10	10	...	...	...	...	...	...
Totals .....	133	114	10	9	161	138	10	13	68	59	1	8	58	49	1	8
Bond—																
Bovine .....	1042	997	24	21	227	181	22	24	222	173	24	25	98	79	9	10
Humanized .....	24	20	3	1	28	23	3	2	31	25	3	3	12	10	1	1
Totals .....	1066	1017	27	22	255	204	25	26	253	198	27	28	110	98	10	11
Boone—																
Bovine .....	119	75	24	20	169	139	15	15	172	143	18	11	116	83	13	20
Humanized .....	10	18	...	...	15	15	...	...	10	10	...	...	11	11	...	...
Totals .....	129	85	24	20	184	154	15	15	182	153	18	11	127	94	13	20
Brown—																
Bovine .....	47	39	5	3	53	43	6	4	78	63	7	8	28	23	3	2
Humanized .....	16	16	...	...	50	30	...	...	24	23	1	...	12	12	...	...
Totals .....	63	55	5	3	83	73	6	4	102	86	8	8	40	35	3	2
Bureau—																
Bovine .....	445	404	8	33	526	465	21	40	534	452	47	35	274	225	32	17
Humanized .....	29	24	3	2	22	22	...	...	31	26	4	1	18	16	2	...
Totals .....	474	428	11	35	548	487	21	40	565	478	51	36	292	241	34	17
Carrill—																
Bovine .....	167	136	17	14	204	180	13	11	185	162	14	9	97	77	8	12
Humanized .....	11	10	1	...	13	11	...	2	11	10	1	...	9	9	...	...
Totals .....	178	146	18	14	217	191	13	13	196	172	15	9	106	86	8	12
Cass—																
Bovine .....	86	71	9	6	108	92	12	4	122	106	11	5	77	69	6	2
Humanized .....	17	12	4	1	29	26	3	...	34	29	5	...	16	14	2	...
Totals .....	103	83	13	7	137	118	15	4	156	135	16	5	93	83	8	2
Champaign—																
Bovine .....	678	584	23	71	901	794	54	53	906	794	48	58	459	412	23	24
Humanized .....	168	117	39	12	189	119	58	12	249	178	60	11	129	52	52	25
Totals .....	846	701	62	83	1090	913	112	65	1149	972	108	69	588	464	75	49
Christian—																
Bovine .....	339	294	19	26	340	274	27	39	334	290	14	30	168	147	7	14
Humanized .....	20	18	1	1	21	18	2	1	20	19	...	1	12	12	...	...
Totals .....	359	312	20	27	361	292	29	40	354	309	14	31	180	159	7	14
Clark—																
Bovine .....	127	113	4	10	147	131	10	6	150	136	7	7	83	78	2	3
Humanized .....	2	2	...	...	1	1	...	...	3	3	...	...	3	3	...	...
Totals .....	129	115	4	10	148	132	10	6	153	139	7	7	86	81	2	3

*Bovine, and with Humanized Virus, at Specified Ages.*

13 TO 14 YEARS.				14 TO 15 YEARS.				15 TO 18 YEARS.				OVER 18 YEARS.				SUMMARY.			
Total .....	Result.			Total .....	Result.			Total .....	Result.			Total .....	Result.			Total .....	Result.		
	T	M	B		T	M	B		T	M	B		T	M	B		T	M	B
209 32	156 25	24 3	19 4	172 16	130 15	16 1	26 ...	175 16	197 15	43 1	35 ...	73 7	54 5	7 2	12 ....	2,844 323	2,258 273	259 33	327 17
241	181	37	23	188	145	17	26	201	212	44	35	80	59	9	12	3,157	2,531	292	344
61 2	51 2	2 ...	8 ...	33 ...	30 ...	2 ...	1 ...	34 ...	26 ...	4 ...	4 ...	2 ...	1 ...	...	1	598 37	509 34	39 ...	50 3
63	53	2	8	33	30	2	1*	34	26	4	4	2	1	...	1	635	543	39	53
70 13	54 11	6 1	10 1	73 8	57 6	8 2	8 ....	67 12	59 11	9 ...	8 1	38 3	27 2	7 ....	4 1	1,054 131	819 108	111 13	124 10
83	65	7	11	81	63	10	8	79	61	9	9	41	29	7	5	1,185	927	124	134
71 15	47 15	15 .....	9 .....	86 8	60 7	15 1	11 ...	141 16	110 16	13 ...	18 ...	43 ...	33 ...	4 ...	6 ...	917 85	960 84	117 1	110 .....
86	62	15	9	94	67	16	11	157	126	13	18	43	33	4	6	1,002	774	118	110
39 12	32 12	3 .....	4 .....	24 9	19 8	2 1	3 ....	58 16	46 14	7 1	5 1	22 5	21 5	2 ...	....	350 124	286 120	35 3	20 1
51	41	3	4	33	27	3	3	74	60	8	6	28	26	2	....	474	406	38	30
209 14	172 10	18 2	19 2	256 18	208 15	26 2	22 1	330 22	264 18	31 3	36 1	82 4	62 4	9 ....	11 ...	2,667 159	2,258 135	190 16	219 8
223	182	20	21	274	223	28	23	252	281	34	37	86	66	9	11	2,826	2,393	206	227
71 10	55 10	9 .....	7 ...	56 7	60 7	8 ....	8 ...	99 10	80 10	7 ...	12 ...	18 2	12 2	2 ...	4 ...	925 74	770 70	78 2	77 2
81	65	9	7	83	67	8	8	109	99	7	12	20	11	2	4	999	849	80	79
56 20	46 15	5 4	5 1	48 15	44 13	2 2	2 ...	82 23	67 21	7 1	8 1	20 3	17 3	1 ....	2 ....	599 157	512 133	53 21	34 3
76	61	9	6	63	57	4	2	105	88	8	9	23	20	1	2	756	645	74	37
302 175	250 88	17 62	35 25	372 189	327 119	11 55	31 15	595 204	495 147	41 52	59 5	181 100	154 34	18 52	9 14	1,165 1,493	614 854	228 430	323 119
477	338	79	60	561	446	66	49	799	642	93	64	281	188	70	23	2,568	1,468	658	442
155 16	138 10	6 2	11 4	146 10	131 8	2 1	13 1	180 17	157 15	7 1	16 1	79 3	69 3	2 ...	8 ....	1,716 129	1,477 113	84 7	155 9
171	148	8	15	156	139	3	14	197	172	8	17	82	72	2	8	1,845	1,599	91	164
44 .....	38 .....	.....	6 .....	64 1	60 1	1 .....	3 .....	92 4	76 4	5 ...	11 ...	34 ...	32 ...	1 ...	1 ...	723 14	648 14	28 .....	47 .....
44	38	.....	6	65	61	1	3	96	80	5	11	34	32	1	1	737	662	28	47

Table IX.—

Counties.	UNDER 8 YEARS.				8 TO 10 YEARS.				10 TO 12 YEARS.				12 TO 13 YEARS.			
	Total .....	Result.			Total .....	Result.			Total .....	Result.			Total .....	Result.		
		T	M	B		T	M	B		T	M	B		T	M	B
Clay—																
Bovine .....	185	149	19	17	185	150	18	17	273	221	27	25	96	77	10	9
Humanized .....	25	19	3	3	13	10	2	1	37	29	4	4	13	10	2	1
Totals .....	210	168	22	20	198	160	20	18	310	250	31	29	109	87	12	10
Clinton—																
Bovine .....	105	72	25	8	103	69	23	11	89	59	21	9	30	21	6	3
Humanized .....	15	11	3	1	12	7	2	3	11	11	.....	.....	11	11	.....	.....
Totals .....	120	83	28	9	115	76	25	14	100	70	21	9	41	32	6	3
Coles—																
Bovine .....	74	60	7	7	84	70	8	6	90	72	10	1	8	143	116	15
Humanized .....	11	9	1	1	12	10	1	1	14	12	1	1	21	18	1	2
Totals .....	85	69	8	8	96	80	9	7	104	84	11	9	164	134	16	14
Cook*—																
Bovine .....	8002	7228	534	240	7774	6923	570	281	5498	4833	443	222	2229	1909	219	101
Humanized .....	215	195	16	4	192	176	14	2	168	151	17	.....	52	48	1	3
Totals .....	8217	7423	550	244	7966	7099	584	283	5666	4984	460	222	2281	1957	220	104
Cumberland—																
Bovine .....	51	36	7	8	52	44	3	5	52	35	10	7	26	22	.....	4
Humanized .....	11	8	2	1	12	11	1	.....	13	13	.....	.....	9	9	.....	.....
Totals .....	62	44	9	9	64	55	4	5	65	48	10	7	35	31	.....	4
DeKalb—																
Bovine .....	232	199	8	25	281	241	14	26	283	231	24	25	156	127	18	11
Humanized .....	14	11	1	2	14	12	.....	2	15	13	2	.....	10	9	1	.....
Totals .....	246	210	9	27	295	253	14	28	298	247	26	25	166	136	19	11
DeWitt—																
Bovine .....	153	124	11	18	163	137	13	13	169	140	14	15	111	98	6	7
Humanized .....	24	20	4	.....	31	22	8	1	39	31	7	1	20	9	6	5
Totals .....	177	144	15	18	194	159	21	14	208	171	21	16	131	107	12	12
Douglas—																
Bovine .....	124	89	20	15	162	137	13	12	149	126	15	8	93	68	10	15
Humanized .....	7	7	.....	.....	11	11	.....	.....	7	7	.....	.....	6	6	.....	.....
Totals .....	131	96	20	15	173	148	13	12	156	133	15	8	99	74	10	15
DuPage—																
Bovine .....	197	160	19	18	177	144	17	16	324	265	32	27	107	87	11	9
Humanized .....	29	23	3	3	26	21	3	2	48	37	6	5	16	12	2	2
Totals .....	226	183	22	21	203	165	20	18	372	302	38	32	123	99	13	11
Edgar—																
Bovine .....	56	36	13	7	61	39	15	7	72	42	21	9	34	23	6	5
Humanized .....	5	5	.....	.....	2	2	.....	.....	3	2	1	.....	3	3	.....	.....
Totals .....	61	41	13	7	63	41	15	7	75	44	22	9	37	26	6	5
Edwards—																
Bovine .....	136	113	8	15	146	121	11	11	179	154	11	14	104	93	4	7
Humanized .....	5	4	1	.....	7	7	.....	.....	11	8	1	2	4	4	.....	.....
Totals .....	141	117	9	15	153	131	11	11	190	162	12	16	108	97	4	7
Effingham—																
Bovine .....	87	74	7	6	86	73	9	4	82	71	8	3	33	28	4	1
Humanized .....	14	9	1	4	11	8	.....	3	13	8	1	4	10	7	1	2
Totals .....	101	83	8	10	97	81	9	7	95	79	9	7	43	35	5	3

\* Chicago included.



Continued.

13 TO 14 YEARS.				14 TO 15 YEARS.*				15 TO 18 YEARS.				OVER 18 YEARS.				SUMMARY.			
Total .....	Result.			Total .....	Result.			Total .....	Result.			Total .....	Result.			Total .....	Result.		
	T	M	B		T	M	B		T	M	B		T	M	B		T	M	B
62 9	50 7	6 1	6 1	84 11	68 9	8 1	7 1	122 15	99 12	12 2	11 1	43 6	35 5	4 .....	4 1	1,049 129	849 101	104 15	96 13
71	57	7	7	94	77	9	8	137	111	14	12	49	40	4	5	1,178	950	119	109
28 4	24 4	4 .....	.....	33 6	27 5	3 .....	3 1	45 9	37 7	3 2	5 .....	2 .....	2 .....	.....	.....	435 60	311 46	85 9	39 5
32	28	4	.....	39	32	3	4	54	44	5	5	2	2	.....	.....	495	357	94	44
108 15	93 12	11 2	4 1	95 14	78 12	10 2	7 .....	113 17	91 13	12 2	10 2	23 4	20 4	2 .....	1 .....	730 108	600 90	75 10	55 8
123	105	13	5	109	90	12	7	130	104	14	12	27	24	2	1	838	690	85	63
1,513 18	1,282 13	158 4	73 1	1017 30	818 29	125 .....	74 .....	1038 14	830 13	119 .....	89 1	183 1	160 .....	11 .....	12 .....	27,251 690	23,983 625	2,179 53	1,092 12
1,531	1,295	162	74	1047	847	125	75	1052	843	119	90	184	160	12	12	27,944	24,008	2,232	1,104
16 3	15 3	.....	1 .....	19 3	15 3	1 .....	3 .....	20 7	19 7	1 .....	.....	5 2	3 2	.....	2 .....	241 60	189 56	22 3	30 1
19	18	.....	1	22	18	1	3	27	26	1	.....	7	5	.....	2	301	245	25	31
121 8	98 8	10 .....	13 9	154 9	127 9	13 .....	14 .....	210 9	167 9	22 .....	21 .....	55 2	41 2	7 .....	7 .....	1,492 81	1,234 73	116 4	142 4
129	106	10	13	163	136	13	14	219	176	22	21	57	43	7	7	1,573	1,307	120	146
60 22	48 14	5 6	7 2	67 21	54 11	4 6	9 4	83 28	66 22	7 6	10 .....	30 8	25 .....	4 6	1 2	836 196	691 131	62 49	80 16
82	62	11	9	88	65	10	13	111	88	13	10	38	25	10	3	1,032	825	111	96
61 12	41 12	12 .....	8 .....	67 6	46 6	12 .....	9 .....	103 12	81 12	9 .....	13 .....	31 .....	25 .....	2 .....	4 .....	791 61	614 61	94 .....	83 .....
73	53	12	8	73	52	12	9	115	93	9	13	31	25	2	4	852	675	94	83
80 12	65 10	8 1	7 1	75 11	61 9	8 1	6 1	135 21	111 16	13 3	11 2	87 12	71 10	9 1	7 1	1,182 175	964 138	117 29	101 17
92	75	9	8	86	70	9	7	156	127	16	13	99	81	10	8	1,357	1,102	137	118
23 1	14 1	5 .....	4 .....	29 4	15 3	9 .....	5 1	44 2	22 1	13 1	9 .....	12 2	6 2	4 .....	2 .....	341 22	197 19	86 2	58 1
24	15	5	4	33	18	9	6	46	23	14	9	14	8	4	2	393	216	88	59
50 4	41 4	2 .....	7 .....	69 1	58 1	4 .....	7 .....	108 10	85 9	10 1	13 .....	39 2	32 2	3 .....	4 .....	811 45	680 29	53 3	78 3
54	45	2	7	70	59	4	7	118	94	11	13	41	34	3	4	856	719	56	81
42 4	37 1	2 1	2 2	32 5	29 2	2 .....	1 3	55 5	49 2	5 .....	1 3	15 1	15 .....	.....	1 .....	432 61	376 36	37 4	19 21
46	38	3	5	37	31	2	4	60	51	5	4	16	15	.....	1	493	403	41	40

Table IX.—

Counties.	UNDER 8 YEARS.				8 TO 10 YEARS.				10 TO 12 YEARS.				12 TO 13 YEARS.			
	Total	Result.			Total	Result.			Total	Result.			Total	Result.		
		T	M	B		T	M	B		T	M	B		T	M	B
Ford—																
Bovine.....	179	157	10	12	210	182	14	14	239	205	17	17	126	113	6	7
Humanized.....	38	29	6	3	48	31	15	2	63	46	15	2	51	14	10	7
Totals.....	217	186	16	15	258	213	29	16	302	251	32	19	157	117	16	14
Fulton—																
Bovine.....	729	638	26	65	839	728	40	71	775	635	72	68	321	265	30	26
Humanized.....	62	53	5	4	64	60	4	....	55	44	9	2	36	33	2	1
Totals.....	791	691	31	69	903	788	44	71	830	679	81	70	357	298	32	27
Greene—																
Bovine.....	53	44	5	4	64	51	6	6	71	58	7	6	52	43	5	4
Humanized.....	8	6	1	1	9	7	1	1	7	5	1	1	5	3	1	1
Totals.....	61	50	6	5	72	58	7	7	78	63	8	7	57	46	6	5
Grundy—																
Bovine.....	130	109	10	11	142	117	12	13	152	123	14	15	71	58	6	7
Humanized.....	7	5	2	....	12	12	....	....	12	9	1	2	4	4	....	....
Totals.....	137	114	12	11	154	129	12	13	164	132	15	17	75	62	6	7
Hamilton—																
Bovine.....	33	27	5	1	26	20	4	2	21	12	6	3	15	13	1	1
Humanized.....	1	1	....	....	2	1	....	1	2	2	....	....	3	3	....	....
Totals.....	34	28	5	1	28	21	4	3	23	14	6	3	18	16	1	1
Hancock—																
Bovine.....	264	215	26	23	272	221	27	24	173	141	17	15	147	119	15	13
Humanized.....	40	31	5	4	39	30	5	4	26	20	3	3	22	17	3	2
Totals.....	304	246	31	27	311	251	32	28	199	161	20	18	169	136	18	15
Hardin—																
Bovine.....	59	32	10	17	57	32	13	12	44	27	9	8	22	15	4	3
Humanized.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Totals.....	59	32	10	17	57	32	13	12	44	27	9	8	22	15	4	3
Henderson—																
Bovine.....	100	66	9	25	117	86	12	19	119	86	13	20	60	46	3	11
Humanized.....	16	14	....	2	27	19	5	3	27	21	2	4	9	6	2	1
Totals.....	116	89	9	27	144	105	17	22	146	107	15	24	69	52	5	12
Henry—																
Bovine.....	267	217	27	23	442	358	43	40	615	499	61	55	173	141	17	15
Humanized.....	40	31	5	4	66	51	8	7	92	72	11	9	26	20	3	3
Totals.....	307	248	32	27	508	409	52	47	707	571	72	64	199	161	20	18
Jackson—																
Bovine.....	93	53	16	24	106	76	13	17	87	61	6	20	46	30	7	9
Humanized.....	....	....	....	....	1	....	....	1	1	....	....	1	2	....	....	2
Totals.....	93	53	16	24	107	76	13	18	88	61	6	21	48	30	7	11
Iroquois—																
Bovine.....	436	375	23	38	442	386	30	26	460	395	35	30	234	211	12	11
Humanized.....	71	59	9	3	90	63	24	3	123	96	24	3	51	23	16	12
Totals.....	507	434	32	41	532	449	54	29	583	491	59	33	285	234	28	23
Jasper—																
Bovine.....	40	19	13	8	47	31	10	6	44	31	7	6	17	9	4	4
Humanized.....	16	5	1	10	12	6	....	6	9	2	1	6	7	3	....	4
Totals.....	46	24	14	18	59	37	10	12	53	33	8	12	24	12	4	8

Continued.

13 TO 14 YEARS.				14 TO 15 YEARS.				15 TO 18 YEARS.				OVER 18 YEARS.				SUMMARY.			
Total .....	Result.			Total .....	Result.			Total .....	Result.			Total .....	Result.			Total .....	Result.		
	T	M	B		T	M	B		T	M	B		T	M	B		T	M	B
80 37	65 21	6 12	9 4	94 39	80 23	4 11	10 5	137 45	112 34	10 11	15 ...	47 18	41 4	5 11	1 3	1,123 319	955 202	72 91	96 26
117	86	18	13	133	103	15	15	182	146	21	15	65	45	16	4	1,442	1,157	163	122
260 26	200 22	35 2	25 2	311 23	238 21	39 2	34 ...	419 31	346 32	53 2	50 ...	106 5	81 5	11 ...	14 ...	3,760 307	3,101 272	306 26	353 9
286	222	37	27	334	259	41	31	453	348	55	50	111	86	11	14	4,067	3,373	332	362
47 7	38 5	5 1	4 1	37 5	30 4	4 1	3 ...	66 10	53 8	7 1	6 2	17 2	13 2	2 ...	2 ...	406 53	330 40	41 7	35 6
54	43	6	5	42	34	5	3	76	61	8	7	19	15	2	2	459	370	48	41
59 4	43 4	7 ...	9 ...	58 5	47 4	4 1	7 ...	88 14	66 12	10 1	12 1	48 3	35 3	6 ...	7 ...	753 61	598 53	69 5	86 3
63	47	7	9	63	51	5	7	102	78	11	13	51	38	6	7	814	651	74	89
12 1	6 1	5 ...	1 ...	12 ...	10 ...	1 ...	1 ...	19 1	15 1	1 ...	3 ...	13 1	8 1	3 ...	2 ...	151 11	111 10	26 ...	11 1
13	7	5	1	12	10	1	1	20	16	1	3	14	9	3	2	162	121	26	15
133 21	112 16	14 3	12 2	119 18	97 14	12 2	10 2	171 25	139 19	17 3	15 3	44 7	36 5	4 1	4 1	1,338 198	1,080 152	132 25	116 21
159	128	17	14	137	111	14	12	196	158	20	18	51	41	5	5	1,526	1,232	157	137
27	11	5	11	22 1	10 1	6	6	32	17	4	21	19	11	4	4	282 1	155 1	55	72
27	11	5	11	23	11	6	6	32	17	4	11	19	11	4	4	283	156	55	72
48 10	38 7	6 2	4 1	46 13	31 9	3 1	12 3	74 29	52 22	5 5	17 2	26 7	17 5	4 1	5 1	599 138	421 103	65 18	113 17
58	45	8	5	59	40	4	15	103	74	10	19	33	22	5	6	737	524	83	130
132 20	107 16	13 2	12 2	127 19	103 15	13 2	11 2	194 30	158 23	19 4	17 3	31 5	26 4	3 1	2 ...	1,981 298	1,600 232	197 36	175 30
152	123	15	14	146	118	15	13	224	181	23	20	36	39	4	2	2,279	1,841	233	205
37	21	5	11	34	21	3	10	48	30	5	13	15	11	...	4	466 4	303	55	108 4
37	21	5	11	34	21	3	10	48	30	5	13	15	11	...	4	468	303	55	112
166 66	140 34	8 20	18 6	237 36	191 19	17 17	29 ...	72 27	65 6	7 18	...	99 60	73 34	11 20	15 6	2,147 521	1,825 336	143 147	169 38
226	174	28	24	273	210	34	29	99	71	25	3	159	107	31	21	2,668	2,171	290	267
29 7	14 2	8 1	7 4	15 8	6 5	5 ...	4 3	39 9	17 6	15 ...	7 3	11 1	5 1	4 ...	2 ...	242 69	132 30	66 3	44 36
36	16	9	11	23	11	5	7	48	23	15	10	12	6	4	2	311	162	60	80

Table IX.—

Counties.	UNDER 8 YEARS.				8 TO 10 YEARS.				10 TO 12 YEARS.				12 TO 13 YEARS.			
	Total	Result.			Total	Result.			Total	Result.			Total	Result.		
		T	M	B		T	M	B		T	M	B		T	M	B
Jersey—																
Bovine.....	153	125	15	13	151	127	15	9	156	126	16	14	62	51	6	5
Humanized.....	23	18	3	2	22	17	3	2	23	18	3	2	9	7	1	1
Totals.....	176	143	18	15	173	144	18	11	179	144	19	16	71	58	7	6
JoDavies—																
Bovine.....	305	248	30	27	322	262	32	28	288	233	29	26	119	97	12	10
Humanized.....	45	35	5	5	47	36	6	5	43	34	5	4	17	14	2	1
Totals.....	350	283	35	32	369	298	38	33	331	267	34	30	136	111	14	11
Johnson—																
Bovine.....	80	23	14	43	109	40	23	46	86	37	18	31	55	27	7	21
Humanized.....													1			1
Totals.....	80	23	14	43	109	40	23	46	86	37	18	31	56	27	7	22
Kane—																
Bovine.....	160	123	15	22	218	183	15	20	220	183	19	18	136	104	19	13
Humanized.....	10	9		1	13	13			13	11	2		9	7	2	
Totals.....	170	132	15	23	231	196	15	20	233	194	21	18	145	111	21	13
Kankakee—																
Bovine.....	247	213	14	20	243	214	15	14	255	226	14	15	118	105	7	6
Humanized.....	45	31	10	4	52	31	16	5	64	46	15	3	31	13	12	6
Totals.....	292	244	24	24	295	245	31	19	319	272	29	18	149	118	19	12
Kendall—																
Bovine.....	92	62	16	14	124	101	11	12	109	91	12	6	74	54	8	12
Humanized.....	5	5			10	10			6	6			7	7		
Totals.....	97	67	16	14	134	111	11	12	115	97	12	6	81	61	8	12
Knox—																
Bovine.....	386	312	39	35	446	361	45	40	285	230	29	26	282	229	28	25
Humanized.....	65	51	8	6	67	52	8	7	46	35	6	5	42	33	5	4
Totals.....	451	363	47	41	513	413	53	47	331	265	35	31	324	262	33	29
Lake—																
Bovine.....	140	119	7	14	174	151	9	14	185	158	13	14	93	74	13	6
Humanized.....	8	6		2	7	7			9	7	2		4	2	2	
Totals.....	148	125	7	16	181	158	9	14	194	165	15	14	97	76	15	6
LaSalle—																
Bovine.....	480	402	27	51	651	561	38	52	549	446	52	51	320	262	36	22
Humanized.....	25	22	1	2	27	25	2		32	27	4	1	22	15	6	1
Totals.....	504	424	28	53	678	586	40	52	581	473	56	52	342	277	42	23
Lawrence—																
Bovine.....	86	77	7	2	72	65	5	2	79	73	3	3	35	31	1	3
Humanized.....	63	48	10	5	55	39	14	2	58	41	17		31	27	4	
Totals.....	149	125	17	7	127	104	19	4	137	114	20	3	66	58	5	3
Lee—																
Bovine.....	236	189	29	18	238	189	23	26	254	217	25	12	147	119	15	13
Humanized.....	35	28	4	3	31	26	2	3	38	32	2	4	22	18	2	2
Totals.....	271	217	33	21	269	215	25	29	292	149	27	16	169	137	17	15
Livingston—																
Bovine.....	427	353	22	52	534	448	39	47	548	448	50	51	305	249	34	22
Humanized.....	24	21	1	2	26	24	2		32	27	4	1	21	14	6	1
Totals.....	451	374	23	54	560	472	41	47	580	474	54	52	326	263	40	23



Continued.

13 TO 14 YEARS.				14 TO 15 YEARS.				15 TO 16 YEARS.				OVER 16 YEARS.				SUMMARY.			
Total.....	Result.			Total.....	Result.			Total.....	Result.			Total.....	Result.			Total.....	Result.		
	T	M	B		T	M	B		T	M	B		T	M	B		T	M	B
44 6	36 4	4 1	4 1	44 5	39 4	4 1	1	83 8	68 6	8 1	7 1	13 2	10 2	2	1	706 98	582 76	70 13	51 9
50	40	5	5	49	43	5	1	91	74	9	8	15	12	2	1	804	658	83	63
104 15	85 12	10 2	9 1	98 14	80 11	10 2	8 1	143 21	118 16	14 3	11 2	30 5	24 4	3 1	3	1,409 297	1,147 162	140 26	122 19
129	97	12	10	112	91	12	9	164	134	17	13	35	28	4	3	1,616	1,309	166	141
39	17	9	13	29	7	7	15	78	25	15	38	33	8	9	16	511 2	184	104	223 2
39	17	9	13	29	7	7	15	78	25	15	38	34	8	9	17	513	184	104	225
98 8	74 7	10 1	14 .....	122 8	97 7	13 1	12 .....	189 9	141 9	17 .....	22 .....	49 1	38 1	4 .....	7	1,179 68	949 66	113 1	126 1
106	81	11	14	130	104	14	12	189	150	17	22	50	39	4	7	1,247	1,006	114	127
81 43	68 22	5 16	8 5	93 49	82 31	3 14	8 4	151 50	126 37	10 13	15 .....	45 22	39 7	5 12	1 3	1,230 356	1,072 218	71 108	87 30
124	90	21	13	142	113	17	12	201	163	23	15	67	46	17	4	1,586	1,290	179	117
46 9	32 9	9 .....	5 .....	55 4	38 4	10 .....	7 .....	88 11	71 11	7 .....	10 .....	26 .....	21 .....	2 .....	3	615 52	471 52	75 .....	69 .....
55	41	9	5	59	42	10	7	99	82	7	10	26	21	2	3	667	523	75	69
139 21	113 17	14 2	12 2	108 15	87 12	11 2	10 1	175 26	143 20	17 3	15 3	35 5	29 4	3 1	3	1,856 287	1,504 224	186 35	166 28
160	130	16	14	123	99	13	11	201	163	20	18	40	33	4	3	2,143	1,728	221	194
63 1	52 .....	5 1	6 .....	85 4	72 4	6 .....	7 .....	123 4	96 4	12 .....	15 .....	27 .....	23 .....	2 .....	2	890 37	745 30	67 5	78 2
64	52	6	6	89	76	6	7	127	100	12	15	27	23	2	2	927	775	72	80
244 11	194 7	22 2	28 2	303 23	251 17	25 4	27 2	299 17	204 17	43 .....	52 .....	72 4	46 4	13 .....	13	3,018 161	2,466 134	256 19	296 8
255	201	24	30	326	268	29	29	316	221	43	52	76	50	13	13	3,179	2,600	275	304
39 30	34 25	3 3	2 2	42 25	38 18	2 6	2 1	76 47	65 33	6 12	1 2	31 20	31 11	..... 8	..... 1	461 330	418 243	27 74	16 13
69	59	6	4	67	56	8	3	123	102	18	3	51	42	8	1	791	661	101	29
69 9	56 8	7 1	6 .....	58 9	48 6	7 1	3 2	113 15	97 13	6 1	10 1	12 1	10 1	1 .....	1	1,127 160	925 132	113 13	89 15
78	64	8	6	67	54	8	5	128	110	7	11	13	11	1	1	1,287	1,057	126	104
248 12	191 8	20 2	37 2	310 17	258 14	24 2	28 1	338 18	239 18	44 .....	55 .....	102 4	76 4	13 .....	13	2,910 151	2,361 134	246 19	303 8
260	199	22	39	327	272	26	29	356	257	44	53	106	80	13	13	3,061	2,495	265	311

Table IX.—

COUNTIES.	UNDER 8 YEARS.				8 TO 10 YEARS.				10 TO 12 YEARS.				12 TO 13 YEARS.			
	Total	Result.			Total	Result.			Total	Result.			Total	Result.		
	.....	T	M	B	.....	T	M	B	.....	T	M	B	.....	T	M	B
Logan—																
Bovine .....	175	144	16	15	234	195	18	21	291	236	29	26	124	102	12	10
Humanized .....	26	26	3	3	35	23	4	3	43	37	5	1	18	14	2	2
Totals.....	201	164	19	18	269	223	22	24	334	273	34	27	142	116	14	12
McDonough—																
Bovine .....	217	178	16	23	272	224	28	20	135	110	12	13	142	115	14	13
Humanized .....	32	25	4	3	41	32	5	4	20	18	2	.....	21	20	1	.....
Totals.....	249	203	20	26	313	256	33	24	155	128	14	13	163	135	15	13
McHenry—																
Bovine .....	510	417	26	67	636	529	40	67	723	592	64	67	395	323	43	29
Humanized .....	31	27	2	2	35	31	2	2	40	34	6	.....	27	18	8	1
Totals.....	541	444	28	69	671	560	42	69	763	626	70	67	422	341	51	30
McLean—																
Bovine .....	455	387	26	42	527	449	38	40	508	410	57	41	269	225	27	17
Humanized .....	19	17	.....	2	20	20	.....	.....	25	20	5	.....	21	14	6	1
Totals.....	474	404	26	44	547	469	38	40	533	430	62	41	290	239	33	18
Macon—																
Bovine .....	262	210	30	22	287	232	29	26	292	242	21	29	127	104	13	10
Humanized .....	39	30	5	4	42	33	5	4	44	37	5	2	19	16	3	.....
Totals.....	301	240	35	26	329	265	34	30	336	279	26	31	146	120	16	10
Macoupin—																
Bovine .....	106	85	11	10	147	119	15	13	170	141	17	12	59	48	6	5
Humanized .....	16	12	2	2	22	20	2	.....	25	21	1	3	9	8	1	.....
Totals.....	122	97	13	12	169	139	17	13	193	162	18	15	68	56	7	5
Madison—																
Bovine .....	371	302	32	37	386	313	38	35	378	311	34	33	140	126	8	6
Humanized .....	55	43	7	5	58	47	7	4	57	46	5	6	21	17	3	1
Totals.....	426	345	39	42	444	360	45	39	435	357	39	39	161	143	11	7
Marion—																
Bovine .....	102	73	11	18	138	101	11	16	121	92	10	19	57	43	6	8
Humanized .....	20	12	4	4	28	21	4	3	21	17	4	.....	10	6	4	.....
Totals.....	122	85	15	22	156	122	15	19	142	109	14	19	67	49	10	8
Marshall—																
Bovine .....	173	141	17	15	178	144	18	16	170	141	17	12	88	71	9	8
Humanized .....	26	20	3	3	25	20	3	2	27	22	2	3	13	11	1	1
Totals.....	199	161	20	18	203	164	21	18	197	163	19	15	101	82	10	9
Mason—																
Bovine .....	146	122	15	9	153	138	7	8	139	117	14	8	74	62	10	2
Humanized .....	13	6	7	.....	9	14	5	.....	10	7	2	1	3	2	1	.....
Totals.....	159	128	22	9	172	152	12	8	149	124	16	9	77	64	11	2
Menard—																
Bovine .....	44	32	5	7	63	58	3	2	63	48	6	9	27	22	3	2
Humanized .....	3	3	.....	.....	4	4	.....	.....	6	5	1	.....	4	2	2	.....
Totals.....	47	35	5	7	67	62	3	2	69	53	7	9	31	24	5	2
Mercer—																
Bovine .....	180	146	18	16	171	139	17	15	190	154	19	17	104	85	10	9
Humanized .....	27	21	3	3	25	20	3	2	28	22	3	3	16	12	2	2
Totals.....	207	167	21	19	196	159	20	17	218	176	22	20	120	97	12	11

Continued.

13 TO 14 YEARS.				14 TO 15 YEARS.				15 TO 16 YEARS.				OVER 16 YEARS.				SUMMARY.			
Total ....	Result.			Total ....	Result.			Total ....	Result.			Total ....	Result.			Total ....	Result.		
	T	M	B		T	M	B		T	M	B		T	M	B		T	M	B
86 3	69 10	9 2	8 1	69 8	58 6	5 1	6 1	115 17	94 13	11 2	10 2	29 4	23 3	3 ....	3 1	1,123 164	921 131	103 19	39 14
99	79	11	9	77	64	6	7	132	107	13	12	33	26	3	4	1,287	1,052	122	113
71 10	61 8	4 1	6 1	51 8	44 6	2 1	5 1	102 15	86 12	10 2	6 1	17 3	13 3	2 ....	2 ....	1,007 150	831 124	88 16	88 10
81	69	5	7	59	50	3	6	117	98	12	7	20	16	2	2	1,163	955	104	98
317 16	253 11	27 3	37 2	313 31	245 25	32 4	36 2	593 27	461 25	58 1	74 1	156 6	119 6	19 ....	18 ....	3,643 214	2,939 177	349 26	395 11
333	264	30	39	344	270	36	38	620	486	59	75	162	125	19	18	3,857	3,116	335	406
206 9	161 7	18 1	27 1	246 17	203 14	20 2	23 1	340 14	260 14	38 ....	42 ....	71 2	53 2	10 ....	8 ....	2,622 127	2,148 108	234 14	240 5
215	168	19	28	263	217	22	24	354	271	38	42	73	55	10	8	2,749	2,256	248	245
105 16	86 14	10 ....	9 2	79 12	65 11	8 1	6 ....	131 19	106 15	13 2	12 2	30 4	24 4	3 ....	3 ....	1,313 195	1,069 160	127 21	117 14
121	100	10	11	91	76	9	6	150	121	15	14	34	28	3	3	1,508	1,229	148	131
58 8	50 7	6 1	2 ....	44 7	36 6	4 1	4 ....	67 10	54 8	7 1	6 1	16 2	12 1	2 1	2 ....	667 99	545 83	68 10	51 6
66	57	7	2	51	42	5	4	77	62	8	7	18	13	3	2	766	628	78	60
110 16	89 11	11 2	10 ....	78 11	69 11	4 ....	5 ....	77 12	62 11	8 ....	8 2	13 1	12 ....	1 ....	1 ....	1,553 231	1,284 188	136 25	133 18
126	103	13	10	89	80	4	5	89	72	8	9	14	12	2	....	1,784	1,472	161	151
37 15	26 13	7 2	4 ....	34 9	29 7	1 2	4 ....	68 9	55 7	6 2	7 ....	25 5	19 3	3 2	3 ....	572 120	438 88	55 25	79 7
52	39	9	4	43	36	3	4	77	62	8	7	30	22	5	3	692	526	80	86
63 9	59 7	7 1	6 1	55 8	45 6	5 1	5 1	77 11	62 9	8 1	7 1	16 2	13 1	2 ....	1 1	820 121	667 96	83 12	70 13
72	57	8	7	63	51	6	6	88	71	9	8	18	14	2	2	941	763	95	83
67 7	53 3	8 4	6 ....	45 6	42 1	1 1	2 4	111 9	86 3	9 5	16 1	20 ....	12 ....	3 ....	5 ....	753 67	632 33	63 28	58 6
74	56	12	6	51	43	2	6	120	89	14	17	20	12	3	5	820	665	91	64
24 4	20 4	2 ....	2 ....	22 2	17 2	3 ....	2 ....	25 4	22 3	3 ....	1 1	11 1	9 1	....	2 ....	277 26	227 19	25 3	24 1
28	24	2	2	24	19	3	2	29	25	3	1	12	10	....	2	303	250	28	25
43 6	35 4	4 1	4 1	39 6	32 4	4 1	3 1	75 11	61 9	7 1	7 1	9 2	7 1	1 1	1 ....	811 121	659 93	80 15	72 13
49	39	5	5	45	36	5	4	86	70	8	8	11	8	2	1	932	752	95	85

Table IX.—

COUNTIES.	UNDER 8 YEARS.				8 TO 10 YEARS.				10 TO 12 YEARS.				12 TO 13 YEARS.			
	Total.....	Result.			Total.....	Result.			Total.....	Result.			Total.....	Result.		
		T	M	B		T	M	B		T	M	B		T	B	M
Monroe—																
Bovine.....	238	203	19	16	195	157	29	9	184	148	16	20	67	53	7	7
Humanized.....	83	70	6	7	63	47	7	9	47	42	3	2	24	19	1	4
Totals.....	321	273	25	23	258	204	36	18	231	190	19	22	91	72	8	11
Montgomery—																
Bovine.....	322	260	32	30	347	283	35	29	349	290	35	24	124	102	11	11
Humanized.....	48	37	6	5	52	41	6	5	52	41	6	5	18	15	1	2
Totals.....	370	297	38	35	399	324	41	34	401	331	41	29	142	117	12	13
Morgan—																
Bovine.....	175	143	15	17	209	169	21	19	178	143	17	18	112	96	8	8
Humanized.....	26	20	3	3	31	24	6	1	27	23	2	2	17	13	2	2
Totals.....	201	163	18	20	240	193	27	20	205	166	19	20	129	109	10	19
Moultrie—																
Bovine.....	165	134	16	15	157	126	16	15	151	122	15	14	71	62	7	2
Humanized.....	25	20	3	2	23	18	2	3	23	20	2	1	10	8	1	1
Totals.....	190	154	19	17	180	144	18	18	174	142	17	15	81	70	8	3
Ogle—																
Bovine.....	40	36	....	4	48	46	1	1	40	39	1	2	19	16	1	2
Humanized.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Totals.....	40	36	....	4	48	46	1	1	40	39	1	2	19	16	1	2
Peoria—																
Bovine.....	592	537	22	33	741	670	34	37	671	580	53	38	189	149	23	17
Humanized.....	30	29	....	1	34	32	....	2	39	33	5	1	34	24	8	2
Totals.....	622	566	22	34	775	702	34	39	710	613	58	39	223	173	31	19
Perry—																
Bovine.....	81	63	4	14	84	64	4	16	78	64	3	11	33	24	3	6
Humanized.....	6	1	4	1	11	4	5	2	11	4	4	3	4	1	2	1
Totals.....	87	64	8	15	95	68	9	18	89	68	7	14	37	25	5	7
Piatt—																
Bovine.....	98	79	10	9	138	112	14	12	112	91	11	10	84	69	8	7
Humanized.....	15	13	1	1	21	17	2	2	17	14	1	2	13	11	1	1
Totals.....	113	92	11	10	159	129	16	14	129	105	12	12	97	80	9	8
Pike—																
Bovine.....	174	141	17	16	328	266	33	29	271	220	27	24	121	98	12	11
Humanized.....	26	21	3	2	48	39	5	4	41	33	4	4	18	14	2	2
Totals.....	200	162	20	18	376	305	38	33	312	253	31	28	139	112	14	13
Pope—																
Bovine.....	96	53	8	35	84	42	6	36	70	31	7	32	51	26	8	17
Humanized.....	29	24	2	3	29	20	3	6	28	20	2	6	13	11	1	1
Totals.....	125	77	10	38	113	62	9	42	98	51	9	38	64	37	9	18
Pulaski—																
Bovine.....	39	30	4	5	31	21	6	4	26	20	5	1	12	7	4	1
Humanized.....	22	4	4	14	19	6	3	10	20	10	....	10	10	5	....	5
Totals.....	61	34	8	19	50	27	9	14	46	30	5	11	22	12	4	6
Putnam—																
Bovine.....	56	44	5	7	76	64	7	5	86	73	4	9	35	26	3	6
Humanized.....	9	9	....	....	10	10	....	....	12	12	....	....	4	3	1	....
Totals.....	65	53	5	7	86	74	7	5	98	85	4	9	39	29	4	6



Continued.

13 TO 14 YEARS.				14 TO 15 YEARS.				15 TO 16 YEARS.				OVER 16 YEARS.				SUMMARY.			
Total.....	Result.			Total.....	Result.			Total.....	Result.			Total.....	Result.			Total.....	Result.		
	T	M	B		T	M	B		T	M	B		T	M	B		T	M	B
42 10	32 5	6 1	4	39 13	32 13	3 .....	4	42 12	33 8	4 1	5 3	7 3	4 3	1 .....	2	814 255	662 207	85 19	67 29
52	37	7	8	52	45	3	4	51	41	5	8	10	7	1	2	1,069	869	104	96
104 15	85 12	10 2	9 1	98 14	80 11	9 2	9 1	107 16	86 12	11 2	10 2	23 3	19 3	2 .....	2	1,474 218	1,205 172	145 25	124 21
119	97	12	10	112	91	11	10	123	98	13	12	26	22	2	2	1,692	1,377	170	145
110 19	90 16	9 .....	11 3	74 11	60 9	8 1	6 1	118 14	95 10	11 2	12 2	38 5	30 4	4 1	4 .....	1,014 159	826 118	93 18	95 14
129	106	9	14	85	69	9	7	132	105	13	14	43	31	5	4	1,164	944	111	109
64 10	54 9	6 .....	4 1	48 7	40 5	5 1	3 1	76 11	61 9	8 1	7 1	21 3	18 3	2 .....	1	753 112	617 92	75 11	61 9
74	63	6	5	55	45	6	4	87	70	9	8	24	21	2	1	865	709	86	70
14	13	1	.....	17	17	.....	.....	31	28	1	5	8	8	.....	.....	222	203	5	14
14	13	1	.....	17	17	.....	.....	34	28	1	5	8	8	.....	.....	222	203	5	14
247 17	202 15	18 1	27 1	238 22	192 20	18 2	18 .....	274 21	199 20	34 .....	41 .....	67 1	47 5	8 4	12 1	3,109 292	2,676 177	210 17	223 8
264	217	19	28	250	212	20	18	295	219	34	42	72	51	9	12	3,311	2,853	227	231
40 4	30 2	3 .....	7 2	21 6	18 4	.....	3 .....	38 7	34 3	2 2	5 2	10 2	8 .....	1 .....	1 2	385 51	302 19	20 17	63 15
44	32	3	9	27	22	.....	5	45	34	4	7	12	8	1	3	436	321	37	78
88 13	71 11	9 2	8 .....	139 21	117 17	14 1	8 3	137 20	111 17	13 2	13 1	38 6	31 4	4 1	3 1	834 126	681 104	83 11	70 11
101	82	11	8	160	134	15	11	157	128	15	14	44	35	5	4	960	785	94	81
124 19	100 15	13 2	11 2	84 12	69 10	8 1	7 1	139 21	113 18	14 2	12 1	39 6	32 4	4 1	3 1	1,280 191	1,039 154	128 20	113 17
143	115	15	13	96	79	9	8	160	131	16	13	45	36	5	4	1,471	1,193	148	130
32 17	19 16	2 1	11 .....	40 17	15 17	11 .....	14 .....	69 20	38 24	8 2	23 3	16 9	11 6	1 .....	4 3	458 161	235 128	51 11	172 22
49	35	3	11	57	32	11	14	98	62	10	26	25	17	1	7	619	383	62	194
9 7	6 3	2 1	1 3	12 10	7 5	4 2	1 3	20 11	15 3	3 4	2 4	3 5	3 1	.....	4	152 104	109 37	28 14	15 53
16	9	3	4	22	12	6	4	31	18	7	6	8	4	.....	4	256	146	42	68
36 6	31 4	3 .....	2 .....	26 5	24 5	1 .....	1 .....	60 5	51 5	7 .....	2 .....	12 6	10 6	1 .....	1 .....	387 57	324 56	31 1	33 .....
42	37	3	2	31	29	1	1	65	56	7	2	18	16	1	1	444	379	32	33

Table IX.—

COUNTIES.	UNDER 8 YEARS.				8 TO 10 YEARS.				10 TO 12 YEARS.				12 TO 13 YEARS.			
	Total.....	Result.			Total.....	Result.			Total.....	Result.			Total.....	Result.		
		T	M	B		T	M	B		T	M	B		T	M	B
Randolph—																
Bovine.....	427	346	43	38	268	217	27	24	258	209	26	23	122	100	12	10
Humanized.....	64	50	8	6	40	31	5	4	38	30	4	4	18	15	1	2
Totals.....	491	396	51	44	308	248	32	28	296	239	30	27	140	115	13	12
Rock Island—																
Bovine.....	852	776	40	36	911	829	40	42	773	701	40	32	340	307	19	14
Humanized.....	56	51	5	....	41	34	2	5	51	44	6	1	34	30	1	3
Totals.....	908	827	45	36	952	863	42	47	824	745	46	33	374	337	20	17
Saline—																
Bovine.....	96	77	10	9	134	109	13	12	175	142	17	16	158	128	16	14
Humanized.....	14	11	2	1	20	16	2	2	26	21	3	2	9	7	1	1
Totals.....	110	88	12	10	154	125	15	14	201	163	20	18	167	135	17	15
Sangamon—																
Bovine.....	173	141	15	17	183	146	19	18	67	52	8	7	75	60	9	6
Humanized.....	25	20	4	1	18	14	1	3	10	8	1	1	11	10	...	1
Totals.....	198	161	19	18	201	160	20	21	77	60	9	8	86	70	9	7
Schuyler—																
Bovine.....	136	110	14	12	256	207	26	23	175	147	12	16	97	78	11	8
Humanized.....	20	16	2	2	38	29	5	4	26	20	3	3	14	11	2	1
Totals.....	156	126	16	14	294	236	31	27	201	167	15	19	111	89	13	9
Scott—																
Bovine.....	109	96	5	8	103	90	3	10	95	77	8	10	51	36	5	10
Humanized.....	6	5	....	1	3	3	....	....	5	5	....	....	2	2	....	....
Totals.....	115	101	5	9	106	93	3	10	100	82	8	10	53	38	5	10
Shelby—																
Bovine.....	282	229	28	25	427	346	43	38	433	354	40	39	188	152	19	17
Humanized.....	42	34	4	4	63	52	6	5	65	56	6	3	28	22	2	4
Totals.....	324	263	32	29	490	398	49	43	498	410	46	42	216	174	21	21
Stark—																
Bovine.....	140	113	14	13	158	128	16	14	91	74	9	8	58	48	6	4
Humanized.....	21	16	3	2	23	20	1	2	12	11	....	1	7	6	1	....
Totals.....	161	129	17	15	181	148	17	16	103	85	9	9	65	54	7	4
St. Clair—																
Bovine.....	1101	854	135	112	973	757	107	109	822	620	103	99	362	284	42	36
Humanized.....	158	133	19	6	149	121	14	14	157	128	19	10	74	62	7	5
Totals.....	1259	987	154	118	1122	878	121	123	979	748	122	109	436	346	49	41
Stephenson—																
Bovine.....	258	209	26	23	270	219	27	24	474	387	44	43	143	117	14	12
Humanized.....	39	30	4	5	40	32	4	4	69	55	7	7	21	16	2	3
Totals.....	297	239	30	28	310	251	31	28	543	442	51	50	164	133	16	15
Tazewell—																
Bovine.....	116	94	12	10	172	140	17	15	144	118	14	12	84	69	8	7
Humanized.....	17	13	2	2	26	20	3	3	21	17	2	2	13	10	2	1
Totals.....	133	107	14	12	198	160	20	18	165	135	16	14	97	79	10	8
Union—																
Bovine.....	22	16	5	1	23	23	....	....	21	18	2	1	20	18	1	1
Humanized.....	4	4	....	....	5	5	....	....	5	4	....	1	7	6	....	1
Totals.....	26	20	5	1	28	28	....	....	26	22	2	2	27	24	1	2

Continued.

13 TO 14 YEARS.				14 TO 15 YEARS.				15 TO 16 YEARS.				OVER 16 YEARS.				SUMMARY.			
Total.....	Result.			Total.....	Result.			Total.....	Result.			Total.....	Result.			Total.....	Result.		
	T	M	B		T	M	B		T	M	B		T	M	B		T	M	B
66 10	52 8	8 1	6 1	78 11	63 9	8 1	7 1	124 19	101 15	12 2	11 12	24 4	20 4	2 .....	2 .....	1,367 204	1,108 162	138 22	121 20
76	60	9	7	89	72	9	8	143	116	14	13	28	24	2	2	1,571	1,270	160	141
296 28	265 24	13 3	18 1	267 21	237 19	9 2	21 .....	293 36	260 31	10 3	23 2	66 7	52 7	2 .....	12 .....	3,798 274	3,427 240	173 22	198 12
324	289	16	19	288	256	11	21	329	291	13	25	73	59	2	12	4,072	3,667	195	210
43 6	35 4	4 1	4 1	49 7	40 6	5 .....	4 1	73 11	59 9	7 1	7 1	18 3	15 2	2 .....	1 1	746 96	605 76	74 10	67 10
49	39	5	5	56	46	5	5	84	68	8	8	21	17	2	2	842	681	84	77
49 9	41 8	3 1	5 .....	86 13	66 10	11 2	9 1	86 13	66 10	11 2	9 1	26 4	21 2	2 .....	3 2	846 107	681 85	86 11	79 11
58	49	4	5	49	76	13	10	99	76	13	10	30	23	2	5	953	766	97	90
61 9	52 8	4 .....	5 1	55 8	44 7	6 1	5 .....	84 12	70 10	6 1	8 1	18 3	14 1	2 .....	2 2	882 130	722 102	81 14	79 14
70	60	4	6	63	51	7	5	96	80	7	9	21	15	2	4	1,012	824	95	93
36 2	30 2	2 .....	4 .....	27 3	22 3	2 .....	3 .....	54 2	47 1	1 .....	6 .....	9 1	4 .....	3 .....	2 .....	484 23	402 21	29 .....	53 2
38	32	2	4	30	25	2	3	56	48	1	7	9	4	3	2	507	423	29	55
151 22	125 17	12 3	14 2	135 20	108 15	13 2	14 3	212 31	173 24	20 4	19 3	75 11	61 9	7 1	7 1	1,903 282	1,548 229	182 28	173 25
173	142	15	16	155	123	15	17	243	197	24	22	86	70	8	8	2,185	1,777	210	198
36 5	29 3	4 1	3 1	43 6	35 4	4 .....	4 2	49 7	40 4	5 2	4 1	13 2	11 1	1 .....	1 1	588 83	478 65	59 8	51 10
41	32	5	4	49	39	4	6	56	44	7	5	15	12	1	2	671	543	67	61
230 47	168 39	34 6	28 2	182 29	136 20	27 6	19 3	144 24	113 17	17 5	14 2	18 5	12 1	2 .....	4 4	3,882 645	2,944 521	467 76	421 48
277	207	40	30	211	156	33	22	168	130	22	16	23	13	2	8	4,477	3,465	543	469
112 17	90 14	11 2	11 1	117 16	95 14	12 2	10 .....	185 28	150 24	18 3	17 1	45 7	36 6	4 .....	5 1	1,604 237	1,303 191	156 24	115 22
129	104	13	12	133	109	11	10	213	174	21	18	52	42	4	6	1,841	1,494	180	167
69 10	56 8	7 1	6 1	60 9	49 7	6 1	5 1	84 12	68 10	8 1	8 1	14 2	12 2	1 .....	1 .....	743 110	606 87	73 12	64 11
79	64	8	7	69	56	7	6	96	78	9	9	16	14	1	1	853	693	85	75
13 1	12 1	1 1	..... .....	14 3	10 3	1 .....	3 .....	24 4	17 4	5 .....	2 .....	7 1	6 4	..... .....	1 .....	144 30	120 28	15 .....	9 2
14	13	2	.....	17	13	1	3	28	21	5	2	8	7	.....	1	174	148	15	11

Table IX.—

COUNTIES.	UNDER 8 YEARS.				8 TO 10 YEARS.				10 TO 12 YEARS.				12 TO 13 YEARS.			
	Total.....	Result.			Total.....	Result.			Total.....	Result.			Total.....	Result.		
		T	M	B		T	M	B		T	M	B		T	M	B
Vermilion—																
Bovine.....	236	191	24	21	305	248	30	27	637	512	61	64	168	136	17	15
Humanized.....	35	28	4	3	46	35	6	5	95	76	10	9	25	20	3	2
Totals.....	271	219	28	24	351	283	36	32	732	588	71	73	193	156	20	17
Wabash—																
Bovine.....	85	80	7	2	109	98	6	5	92	78	4	10	45	35	7	3
Humanized.....	39	32	4	3	53	42	6	5	57	52	5	.....	22	20	.....	2
Totals.....	128	112	11	5	162	140	12	10	149	130	9	10	67	55	7	5
Warren—																
Bovine.....	196	158	20	18	262	213	26	23	235	191	23	21	119	97	12	10
Humanized.....	29	23	3	3	40	31	5	4	35	28	4	3	18	14	2	2
Totals.....	225	181	23	21	302	244	31	27	270	219	27	24	137	111	14	12
Washington—																
Bovine.....	54	47	5	2	60	52	5	3	66	58	3	5	22	19	1	2
Humanized.....	5	5	.....	.....	2	2	.....	.....	5	4	1	.....	3	3	.....	.....
Totals.....	59	52	5	2	62	54	5	3	71	62	4	5	25	22	1	2
Wayne—																
Bovine.....	411	317	35	59	435	358	34	43	458	359	44	55	230	177	24	29
Humanized.....	23	17	4	2	40	37	1	2	47	34	6	7	17	16	1	.....
Totals.....	434	334	39	61	475	395	35	45	505	393	50	62	247	193	25	29
White—																
Bovine.....	272	221	24	27	338	275	33	30	365	295	36	34	143	116	14	13
Humanized.....	39	30	5	4	27	21	3	3	54	43	6	5	21	17	2	2
Totals.....	311	251	29	31	365	296	36	33	419	338	42	39	164	133	16	15
Whiteside—																
Bovine.....	298	241	30	27	314	255	31	28	323	262	32	29	155	125	16	14
Humanized.....	44	36	3	5	47	37	6	4	42	33	5	4	23	18	2	3
Totals.....	342	277	33	32	361	292	37	32	365	295	37	33	178	143	18	17
Will—																
Bovine.....	218	177	22	19	300	254	30	16	318	259	32	27	126	102	13	11
Humanized.....	33	27	3	3	41	34	3	4	47	40	2	5	19	15	2	2
Totals.....	251	204	25	22	341	288	33	20	365	299	34	32	145	117	15	13
Williamson—																
Bovine.....	96	72	6	18	92	74	7	11	93	77	7	9	51	39	7	5
Humanized.....	3	2	1	.....	5	4	1	.....	5	5	.....	.....	9	9	.....	.....
Totals.....	99	74	7	18	97	78	8	11	98	82	7	9	60	48	7	5
Winnebago—																
Bovine.....	423	342	43	38	440	356	44	40	427	343	41	43	238	183	34	21
Humanized.....	53	43	5	5	53	43	5	5	64	50	6	8	35	27	4	4
Totals.....	476	385	48	43	493	399	49	45	491	393	47	51	273	210	38	25
Woodford—																
Bovine.....	99	80	10	9	114	94	11	9	118	96	12	10	61	50	6	5
Humanized.....	15	12	2	1	17	13	2	2	18	14	1	3	6	5	1	.....
Totals.....	114	92	12	10	131	107	13	11	136	110	13	13	67	55	7	5



Continued.

13 TO 14 YEARS.				14 TO 15 YEARS.				15 TO 18 YEARS.				OVER 18 YEARS.				SUMMARY.			
Total.....	Result.			Total.....	Result.			Total.....	Result.			Total.....	Result.			Total.....	Result.		
	T	M	B		T	M	B		T	M	B		T	M	B		T	M	B
105 16	85 13	10 2	10 1	116 17	94 13	12 2	10 2	177 27	143 22	18 3	16 2	61 8	50 6	6 2	5 .....	1,805 269	1,459 213	178 32	168 24
121	98	12	11	133	107	14	12	204	165	21	18	69	56	8	5	2,074	1,672	210	192
38 25	34 22	3 3	1 .....	36 18	29 17	5 1	2 .....	47 31	40 26	4 3	3 2	15 8	14 8	.....	1 .....	472 257	408 222	36 23	28 12
63	56	6	1	54	46	6	2	78	66	7	5	23	22	.....	1	729	630	59	40
68 10	54 8	7 1	7 1	67 9	54 7	7 1	6 1	99 16	80 13	10 2	9 1	22 3	18 3	2 .....	2 .....	1,068 160	865 127	107 18	96 15
78	62	8	8	76	61	8	7	115	93	12	10	25	21	2	2	1,228	992	125	111
22 2	20 2	2 .....	11 3	11 3	.....	.....	.....	36 4	32 3	1 1	3 .....	10 2	9 2	1 .....	.....	281 26	248 24	18 2	15 .....
21	22	2	.....	14	14	.....	.....	40	35	2	3	12	11	1	.....	307	272	20	15
182 22	138 19	15 1	29 2	204 28	154 26	19 2	31 .....	312 43	233 36	36 4	43 3	138 13	98 13	18 .....	22 .....	2,368 223	1,834 188	225 19	309 16
204	157	16	31	232	180	21	31	355	269	40	46	151	111	18	22	2,591	2,022	244	325
111 17	90 13	10 1	11 3	128 19	105 15	12 2	11 2	191 28	155 23	19 2	17 3	64 9	52 7	6 1	6 1	1,612 214	1,309 159	154 22	149 23
128	103	11	14	147	120	14	13	219	178	21	20	73	59	7	7	1,816	1,468	176	172
82 13	66 10	8 2	8 1	73 11	60 9	7 1	6 1	126 19	102 15	13 2	11 2	44 7	36 5	4 1	4 1	1,417 206	1,149 163	141 22	127 21
95	76	10	9	84	69	8	7	145	117	15	13	51	41	5	5	1,623	1,312	163	148
95 14	76 13	9 .....	10 1	84 14	68 12	8 1	8 1	118 18	96 13	12 3	10 2	36 5	29 4	4 1	3 .....	1,295 191	1,061 158	130 15	104 18
109	89	9	11	98	80	9	9	136	109	15	12	41	33	5	3	1,486	1,219	145	122
36 5	29 4	4 1	3 .....	33 7	33 6	2 .....	3 1	55 7	51 5	2 .....	2 2	27 5	22 4	4 .....	1 1	490 45	397 39	39 3	54 3
41	33	5	3	45	39	2	4	62	56	2	4	32	26	4	2	535	436	42	57
179 27	145 23	18 1	16 3	185 28	149 23	19 3	17 2	271 70	221 55	27 8	23 7	86 13	70 10	9 2	7 1	2,249 356	1,809 284	235 35	205 37
206	168	19	19	213	172	22	19	341	276	35	30	99	80	11	8	2,606	2,093	270	242
37 5	29 4	4 .....	4 1	32 5	27 3	2 1	3 1	48 7	39 5	5 1	4 1	8 1	6 1	1 .....	1 .....	517 74	421 57	51 8	45 9
42	33	4	5	37	30	3	4	55	44	6	5	9	7	1	1	591	478	59	54

X.—RECAPITULATION of Results of Primary Vaccinations, with Percentages of Typical, Modified and Bad Results, with Bovine and with Humanized Virus, at Specified Ages.

VIRUS.	UNDER 8 YEARS.				8-10 YEARS.				10-12 YEARS.			
	Total	Result.			Total	Result.			Total	Result.		
		T	M	B		T	M	B		T	M	B
Bovine .....	29,173	24,706	2,220	2,247	31,084	26,276	2,503	2,305	28,683	23,686	2,721	2,276
Percentages .....		84.7	7.6	7.7		84.5	8.0	7.5		82.5	9.4	7.9
Humanized .....	2,897	2,239	424	234	3,045	2,428	379	238	2,889	2,250	419	220
Percentages .....		77.4	14.6	8.0		79.8	12.4	7.8		77.9	14.5	7.6
Totals .....	32,070	26,945	2,644	2,481	34,129	28,704	2,882	2,543	31,572	25,936	3,140	2,496
Percentages .....		84.0	8.2	7.8		84.1	8.4	7.5		82.1	9.9	8.0

VIRUS.	12-13 YEARS.				13-14 YEARS.				14-15 YEARS.			
	Total	Result.			Total	Result.			Total	Result.		
		T	M	B		T	M	B		T	M	B
Bovine .....	13,470	11,090	1,312	1,068	9,914	8,001	961	952	9,534	7,725	892	917
Percentages .....		82.3	9.7	8.0		80.7	9.7	9.6		81.0	9.3	9.7
Humanized .....	1,638	1,235	242	161	1,377	1,012	233	132	1,310	1,007	201	1.2
Percentages .....		75.4	14.8	9.8		73.5	16.9	9.6		76.9	15.3	7.8
Totals .....	15,108	12,325	1,554	1,229	11,291	9,013	1,194	1,084	10,844	8,732	1,093	1,019
Percentages .....		81.5	10.3	8.2		79.8	10.6	9.6		80.5	10.1	9.4

VIRUS.	15-18 YEARS.				OVER 18 YEARS.				SUMMARY.			
	Total	Result.			Total	Result.			Total	Result.		
		T	M	B		T	M	B		T	M	B
Bovine .....	13,022	10,287	1,313	1,422	3,608	2,834	373	401	138488	114605	12,295	11,588
Percentages .....		79.0	10.1	10.9		78.6	10.3	11.1		82.7	8.9	8.4
Humanized .....	1,743	1,373	242	128	549	349	135	65	15,448	11,893	2,275	1,230
Percentages .....		78.7	13.9	7.4		63.6	24.6	11.8		76.9	14.8	8.3
Totals .....	14,765	11,660	1,555	1,550	4,157	3,182	508	466	153336	126498	14,570	12,868
Percentages .....		79.0	10.5	10.5		76.6	12.2	11.2		82.2	9.5	8.3

XI—TABLE showing Results of Revaccination with Bovine and with Humanized Virus, at Specified Ages.

COUNTIES.	UNDER 12 YEARS.					12 TO 13 YEARS.					13 TO 14 YEARS.					OVER 14 YEARS.					SUMMARY.					
	Result.			Total	Result.			Total	Result.			Total	Result.			Total	Result.			Total	Result.			Total		
	T	M	B		T	M	B		T	M	B		T	M	B		T	M	B							
Adams—	537	299	38	200	299	108	25	76	182	90	18	9	74	516	261	67	182	1,438	758	148	532					
Bovine	33	17	5	11	17	9	2	6	18	9	2		7	40	29	2	9	108	64	11	33					
Humanized																										
Totals	570	316	43	211	226	117	27	82	200	99	20		81	550	290	69	191	1,546	822	159	565					
Alexander—																										
Bovine	127	56	20	51	33	18	4	11	36	16	9		11	62	25	5	32	258	115	38	105					
Humanized	18	9	1	8					3	2			1	2		1	1	23	11	2	10					
Totals	145	65	21	59	33	18	4	11	39	18	9		12	64	25	6	33	281	126	40	115					
Bond—																										
Bovine	114	62	27	25	46	32	8	6	24	11	7		6	72	36	20	16	256	141	62	53					
Humanized	18	11	4	3	2	2			3	2	1			7	4		3	30	19	5	6					
Totals	132	73	31	28	48	34	8	6	27	13	8		6	79	40	20	19	286	160	67	59					
Boone																										
Bovine	19	15		4	9	9			6	4			2	54	39	2	13	88	67	2	19					
Humanized	2	2			2	2			2	2				3	3			9	9							
Totals	21	17		4	11	11			8	6			2	57	42	2	13	97	76	2	19					
Brown																										
Bovine	30	21	2	7	4	3		1	112	6	4		2	29	17	4	8	74	47	10	17					
Humanized	7	2	2	3	2	2			1				1	11	3	3	5	21	7	5	9					
Totals	37	23	4	10	6	5		1	113	6	4		3	40	20	7	13	95	54	15	26					
Bureau																										
Bovine	267	150	42	75	80	47	15	18	71	42	13		19	283	162	39	82	704	401	169	194					
Humanized	8	5	1	2	6	5		1	1	1				16	5	4	7	31	16	5	10					
Totals	275	155	43	77	86	52	15	19	72	43	13		19	299	167	43	89	735	417	174	204					

Table No. XI--Continued.

COUNTIES.	UNDER 12 YEARS.					12 TO 13 YEARS.					13 TO 14 YEARS.					OVER 14 YEARS.					SUMMARY.				
	Result.			Result.			Result.			Result.			Result.			Result.			Result.			Result.			
	Total	T	M	B	Total	T	M	B	Total	T	M	B	Total	T	M	B	Total	T	M	B	Total	T	M	B	Total
Carroll--	76	45	13	18	26	20	4	2	13	6	3	4	49	29	6	14	104	100	26	38	164	100	26	38	164
Bovine	2	2			2	2			1	1			3	2	1		8	7	1		8	7	1		8
Humanized																									
Totals	78	47	13	18	28	22	4	2	14	7	3	4	52	31	7	14	172	167	27	38	172	167	27	38	172
Cass--	54	30	3	18	15	12	2	1	14	11		3	44	32	3	9	124	85	8	31	181	85	8	31	181
Bovine	7	5	1		1				4	3			6	5	1		18	14	2	2	18	14	2	2	18
Humanized																									
Totals	58	35	4	19	16	13	2	1	18	14	1	3	50	37	4	9	142	99	10	33	142	99	10	33	142
Champaign--	271	149	31	91	112	62	14	36	101	49	15	37	494	292	66	136	978	552	126	300	978	552	126	300	978
Bovine	18	8	3	7	12	6	1	5	5	2	2	1	21	6	1	14	56	22	7	27	56	22	7	27	56
Humanized																									
Totals	289	157	31	98	124	68	15	41	106	51	17	38	515	298	67	150	1,034	574	133	327	1,034	574	133	327	1,034
Christian--	79	43	7	29	34	19	5	10	31	15	5	11	126	66	19	41	270	113	36	91	270	113	36	91	270
Bovine	1				1								2	2			4	2		2	4	2			4
Humanized																									
Totals	80	43	7	30	35	19	5	11	31	15	5	11	128	68	19	41	274	145	36	93	274	145	36	93	274
Clark--	13	6			11	3	2	6	8	3	2	3	35	17	10	8	67	29	14	24	67	29	14	24	67
Bovine																									
Humanized																									
Totals	13	6			11	3	2	6	8	3	2	3	35	17	10	8	67	29	14	24	67	29	14	24	67
Clay--	45	26	7	12	14	8	2	4	14	11		3	62	34	11	17	135	79	20	36	135	79	20	36	135
Bovine	2	1			1								4	3		1	7	4	1	2	7	4	1	2	7
Humanized																									
Totals	47	27	7	13	15	8	3	4	14	11		3	66	37	11	18	142	83	21	38	142	83	21	38	142



Clinton— Bovine Humanized	45	28	9	8	21	9	7	5	33	17	6	10	65	46	10	9	162	100	32	30
Totals	57	36	13	8	23	11	7	5	4	4	.....	.....	.....	8	6	1	26	20	5	1
Coles— Bovine Humanized	185	107	31	47	58	33	10	15	48	29	8	11	178	100	30	48	469	269	79	121
Totals	195	114	32	49	61	35	10	16	51	30	9	12	189	106	32	51	496	283	88	128
*Cook— Bovine Humanized	25,515	16,163	4,920	4,432	4,559	2,872	914	773	3,338	1,975	750	653	5,311	3,088	1,137	1,086	38,773	24,098	7,721	6,954
Totals	26,327	16,893	4,964	4,470	4,648	2,926	925	797	3,516	2,048	794	674	5,388	3,134	1,157	1,097	39,879	25,001	7,840	7,028
Cumberland— Bovine Humanized	15	7	2	6	7	2	.....	5	5	3	1	1	15	5	4	6	42	17	7	18
Totals	24	13	3	8	11	5	.....	6	7	4	2	1	20	10	4	6	62	32	9	21
DeKalb— Bovine Humanized	129	72	18	39	43	27	5	11	40	21	6	13	182	107	22	53	394	227	51	116
Totals	133	74	18	41	46	29	5	12	40	21	6	13	192	111	23	58	411	235	52	124
DeWitt— Bovine Humanized	61	30	13	18	26	16	4	6	15	5	4	6	47	12	15	20	149	63	36	50
Totals	68	34	15	19	28	18	4	6	15	5	4	6	49	13	15	21	160	70	38	52
Douglas— Bovine Humanized	42	21	7	11	27	16	4	7	25	13	5	7	91	53	15	23	185	106	31	48
Totals	45	26	7	12	28	16	5	7	26	13	5	8	97	57	16	24	196	112	33	51
DuPage— Bovine Humanized	133	93	15	25	30	22	4	4	25	15	4	6	112	92	7	13	250	162	40	48
Totals	135	95	15	25	31	23	4	4	27	17	4	6	114	94	7	13	257	169	40	48

\* Chicago included.

Table XI.—Continued.

COUNTIES.	UNDER 12 YEARS.				13 TO 14 YEARS.				13 TO 14 YEARS.				OVER 14 YEARS.				SUMMARY.			
	Total	Result.			Total	Result.			Total	Result.			Total	Result.			Total	Result.		
		T	M	B		T	M	B		T	M	B		T	M	B				
Edgar— Bovine..... Humanized..... Totals .....	8 3 1 4	3 1 1	1 4	2 2	3 5	2 2	1 1	8 1	1 1	5 2	2 2	22 1	9 3	2 1	11 1	41 4	15 2	9 2	17 .....	
Edwards— Bovine..... Humanized..... Totals .....	15 1 16	7 1 8	3 1 3	5 1	6 2	2 2	2 2	8 .....	3 .....	3 .....	2 .....	21 2	9 1	5 .....	7 1	50 3	21 2	13 .....	16 1	
Effingham— Bovine..... Humanized..... Totals .....	6 2 8	2 2 4	3 1 3	1 4	3 1	..... 1	1 .....	3 1	2 .....	..... .....	1 .....	16 8	5 3	1 2	10 3	29 12	12 5	4 3	13 4	
Fayette— Bovine..... Humanized..... Totals .....	33 2 35	19 1 20	5 1 5	9 1	18 1	9 1	4 1	20 1	12 1	3 .....	5 .....	66 4	39 3	11 .....	16 1	137 8	79 5	23 1	35 2	
Ford— Bovine..... Humanized..... Totals .....	83 4 87	47 2 49	12 1 13	24 1	32 1	20 1	4 .....	25 4	12 1	4 .....	9 3	118 3	65 3	20 3	33 .....	258 14	144 8	40 2	74 4	
Fulton— Bovine..... Humanized..... Totals .....	504 24 528	280 13 293	54 3 57	170 8	204 24	116 13	27 3	168 8	85 5	24 .....	59 3	530 31	285 21	60 4	185 6	1,406 78	766 48	165 9	475 21	

Greene— Bovine .....	85	40	24	33	24	2	9	31	22	1	8	104	58	20	26	255	144	46	65
Humanized .....	5	3	1	2	1	.....	1	2	2	.....	.....	6	3	1	2	15	9	2	4
Totals .....	90	43	24	37	25	2	10	33	24	1	8	110	61	21	28	270	153	48	69
Grundy— Bovine .....	107	60	23	24	13	6	5	19	10	4	5	39	22	10	7	189	105	43	41
Humanized .....	3	2	.....	1	.....	.....	.....	2	1	1	.....	2	1	.....	1	7	4	1	2
Totals .....	110	62	23	25	13	6	5	21	11	5	5	41	23	10	8	196	109	44	43
Hamilton— Bovine .....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	2	1	.....	13	2	1	10
Humanized .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals .....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	2	1	.....	13	2	1	10
Hancock— Bovine .....	376	227	51	98	105	60	17	28	103	57	26	27	147	52	78	861	491	146	224
Humanized .....	20	12	3	5	7	4	1	2	6	4	1	1	13	7	4	46	27	7	12
Totals .....	396	239	54	103	112	64	18	30	109	61	27	21	151	51	82	907	518	153	236
Hardin— Bovine .....	11	10	.....	1	8	5	1	2	3	2	.....	1	10	1	3	36	27	2	7
Humanized .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals .....	11	10	.....	1	8	5	1	2	3	2	.....	1	10	1	3	36	27	2	7
Henderson— Bovine .....	23	11	1	11	16	4	1	11	12	3	3	62	16	7	39	113	34	12	67
Humanized .....	5	.....	1	4	.....	2	.....	.....	2	1	.....	1	3	4	4	20	6	5	9
Totals .....	28	11	2	15	18	6	1	11	14	4	3	73	19	11	43	133	40	17	76
Henry— Bovine .....	333	204	59	80	85	41	15	29	83	53	15	15	167	46	75	799	465	135	199
Humanized .....	19	11	3	5	5	1	2	2	5	4	1	15	10	1	4	44	26	7	11
Totals .....	362	215	62	85	90	42	17	31	88	57	16	15	177	47	79	843	491	142	210
Iroquois— Bovine .....	321	168	78	95	103	67	16	26	79	41	14	21	164	46	65	888	503	151	291
Humanized .....	11	8	1	2	5	5	.....	.....	5	2	2	1	6	1	4	27	16	4	7
Totals .....	332	166	79	97	108	72	16	26	84	46	16	22	169	47	69	885	519	155	298
Jackson— Bovine .....	39	21	9	9	11	6	4	1	23	10	5	8	47	14	20	13	120	51	38
Humanized .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals .....	39	21	9	9	11	6	4	1	23	10	5	8	47	14	20	13	120	51	38

Table XI.—Continued.

COUNTIES.	UNDER 12 YEARS.					12 TO 13 YEARS.					13 TO 14 YEARS.					OVER 14 YEARS.					SUMMARY.				
	Result.			Total		Result.			Total		Result.			Total		Result.			Total		Result.			Total	
	T	M	B			T	M	B			T	M	B			T	M	B			T	M	B		
	T	M	B	T	M	B	T	M	B	T	M	B	T	M	B	T	M	B	T	M	B	T	M	B	
Jefferson—	7	2	5	4	1	1	2	5	1	4	1	4	14	4	3	7	30	7	5	18	30	7	5	18	
Bovine.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Humanized.....	8	3	5	5	1	1	3	5	1	4	1	4	15	5	3	7	33	9	5	19	33	9	5	19	
Totals.....	113	65	19	44	26	7	11	35	20	6	9	9	90	53	14	23	282	164	46	72	282	164	46	72	
Jersey—	7	4	1	2	2	1	1	2	2	1	1	1	5	3	1	1	16	10	2	4	16	10	2	4	
Bovine.....	120	69	20	46	27	7	12	37	22	6	9	9	95	56	15	24	298	174	48	76	298	174	48	76	
Humanized.....	184	110	26	38	28	10	1	46	19	9	18	18	134	77	23	34	402	234	68	100	402	234	68	100	
Totals.....	194	116	28	40	28	11	1	49	22	9	18	18	141	82	23	36	424	248	71	105	424	248	71	105	
Johnson—	5	1	4	2	2	1	1	1	1	1	1	1	12	5	7	20	1	6	13	20	1	6	13	20	
Bovine.....	5	1	4	2	2	1	1	1	1	1	1	1	12	5	7	20	1	6	13	20	1	6	13	20	
Humanized.....	124	76	18	40	26	4	10	38	22	5	11	11	130	77	16	37	332	201	43	88	332	201	43	88	
Totals.....	128	78	18	42	28	4	10	38	22	5	11	11	136	80	16	40	344	208	43	93	344	208	43	93	
Kane—	124	76	18	40	26	4	10	38	22	5	11	11	130	77	16	37	332	201	43	88	332	201	43	88	
Bovine.....	4	2	9	2	2	1	1	1	1	1	1	1	6	3	3	8	12	7	5	12	7	5	12	7	
Humanized.....	230	139	40	59	34	9	16	45	25	8	12	12	162	87	24	41	486	285	81	120	486	285	81	120	
Totals.....	237	142	41	62	36	9	17	46	25	9	12	12	167	89	24	44	502	292	83	127	502	292	83	127	



Kendall— Bovine Humanized	54	38	7	9	14	11	1	2	10	7	1	2	27	18	2	7	105	74	11	20
Totals	55	39	7	9	45	12	1	2	12	9	1	2	28	19	2	7	110	79	11	20
Knox— Bovine Humanized	227	128	39	60	73	41	12	17	63	37	14	12	152	81	26	45	515	294	91	134
Totals	230	138	39	62	71	45	12	17	69	36	18	12	160	84	26	50	512	306	95	141
Lake— Bovine Humanized	151	88	27	36	39	26	5	8	33	19	5	9	112	67	14	31	335	200	51	84
Totals	155	91	27	37	40	27	5	8	33	19	5	9	114	68	14	32	332	205	51	86
LaSalle— Bovine Humanized	583	352	104	127	139	93	26	26	122	69	18	35	341	154	58	129	1,263	768	200	325
Totals	595	358	105	132	146	97	26	29	127	72	19	36	358	160	59	139	1,334	787	203	341
Lawrence— Bovine Humanized	5	2	2	1	2	2	.....	.....	5	4	1	.....	39	18	8	13	51	26	11	11
Totals	13	5	6	2	5	3	2	.....	10	7	3	.....	50	24	11	18	58	36	22	20
Lee— Bovine Humanized	247	142	42	63	69	38	14	17	47	26	8	13	118	67	20	34	481	273	84	124
Totals	260	150	44	66	73	40	15	18	49	28	8	13	126	72	21	35	508	290	88	130
Livingston— Bovine Humanized	345	205	51	86	114	69	43	32	85	42	13	30	400	234	49	117	944	550	129	265
Totals	355	241	51	90	122	73	13	36	88	43	15	30	417	240	49	128	982	567	131	284
Logan— Bovine Humanized	227	159	47	71	101	58	17	26	89	51	15	23	257	145	46	66	724	413	125	186
Totals	294	168	50	76	107	61	18	28	94	51	16	24	272	156	47	69	767	439	141	197
McDonough— Bovine Humanized	147	87	21	39	59	35	9	15	61	39	7	15	129	66	30	33	39	227	67	102
Totals	155	97	21	41	62	36	10	16	62	40	7	15	137	70	32	35	416	239	70	107

Table XI.—Continued.

COUNTIES.	UNDER 12 YEARS.				12 TO 13 YEARS.				13 TO 14 YEARS.				OVER 14 YEARS.				SUMMARY.			
	Result.			Total	Result.			Total	Result.			Total	Result.			Total	Result.			
	T	M	B		T	M	B		T	M	B		T	M	B		T	M	B	T
MeHenry— Bovine Humanized.....	271 14	156 6	33 1	82 7	111 9	68 5	12 .....	31 4	106 3	51 1	13 1	36 1	491 23	289 8	55 1	147 14	973 49	564 20	113 3	296 26
Totals.....	285	162	34	89	120	73	12	35	103	52	14	37	514	297	56	161	1,022	584	116	322
McLean— Bovine Humanized.....	662 37	396 3	123 3	143 1	157 10	98 7	23 .....	36 3	116 5	65 2	20 .....	31 3	382 13	224 5	54 .....	104 8	1,317 35	783 17	220 3	314 15
Totals.....	699	399	126	144	167	105	23	39	121	67	20	34	395	229	54	112	1,352	800	223	329
Macon— Bovine Humanized.....	303 17	172 12	52 2	79 3	124 2	71 .....	21 1	32 1	108 1	62 .....	18 .....	28 1	290 16	165 10	49 2	76 4	825 36	470 22	140 5	215 9
Totals.....	320	184	54	82	126	71	22	33	109	62	18	29	306	175	51	80	861	492	145	224
Macoupin— Bovine Humanized.....	107 6	60 4	18 1	29 1	43 3	24 2	7 .....	12 1	38 2	25 2	6 .....	7 .....	116 7	67 4	21 1	28 2	304 18	176 12	52 2	76 4
Totals.....	113	64	19	30	46	26	7	13	40	27	6	7	123	71	22	30	322	188	54	80
Madison— Bovine Humanized.....	303 16	177 10	50 2	76 4	123 7	72 4	21 1	30 2	80 4	43 2	11 1	26 1	175 10	106 7	24 1	45 2	681 37	398 23	106 5	177 9
Totals.....	319	187	52	80	130	76	22	32	84	45	12	27	185	113	25	47	718	331	111	186
Marion— Bovine Humanized.....	38 3	15 1	10 .....	13 2	10 1	3 1	4 .....	3 .....	24 4	7 2	4 1	13 1	64 10	26 4	17 1	21 5	136 18	51 8	35 2	50 8
Totals.....	41	16	10	15	11	4	4	3	28	9	5	14	74	30	18	26	154	59	37	58

Marshall— Bovine Humanized	148	85	26	37	32	18	5	9	26	15	4	7	57	32	10	15	263	150	45	68
Totals	157	91	27	39	34	26	5	9	28	16	5	7	59	32	10	17	278	159	47	72
Mason— Bovine Humanized	24	12	2	16	8	5	1	2	15	9		6	56	39	1	16	103	65	4	34
Totals	26	12	2	12	8	5	1	2	16	10		6	59	40	1	18	110	67	4	39
McCard— Bovine Humanized	12	5	3	4	3		1	2	5	1	3	1	21	11	4	6	41	17	11	13
Totals	12	5	3	4	4		1	3	6	1	4	1	22	12	4	6	44	18	12	14
Meyer— Bovine Humanized	141	78	27	36	29	14	8	7	36	20	6	10	87	51	15	21	293	163	56	74
Totals	148	82	28	38	31	16	8	7	38	21	6	11	92	54	16	22	309	173	58	78
Monroe— Bovine Humanized	217	148	51	18	51	31	15	5	55	34	19	2	128	71	47	10	151	284	132	35
Totals	288	198	64	26	66	39	20	7	66	40	21	5	152	79	58	15	475	292	143	40
Montgomery— Bovine Humanized	302	175	51	76	125	73	20	32	86	48	16	22	222	126	38	58	735	422	125	188
Totals	318	188	51	79	130	73	21	36	92	50	17	25	235	135	42	58	775	446	131	198
Morgan— Bovine Humanized	229	131	39	59	97	55	16	26	93	54	16	23	258	147	44	67	677	387	115	175
Totals	241	138	41	62	103	58	17	28	98	58	16	24	273	156	46	71	715	410	129	185
Moultrie— Bovine Humanized	67	38	11	18	24	12	4	8	25	15	4	6	70	40	14	16	186	105	33	48
Totals	70	41	11	18	25	12	4	9	26	15	5	6	73	42	14	17	194	110	34	50
Ogle— Bovine Humanized	27	16		11	3		2	1	7	4	1	2	29	10	2	17	66	30	5	31
Totals	27	16		11	3		2	1	7	4	1	2	29	10	2	17	66	30	5	31

Table No. XI.—Continued.

COUNTIES.	UNDER 12 YEARS.					12 TO 13 YEARS.					13 TO 14 YEARS.					OVER 14 YEARS.					SUMMARY.				
	Result.			Total	Result.			Total	Result.			Total	Result.			Total	Result.			Total	Result.				
	T	M	B		T	M	B		T	M	B		T	M	B										
Peoria— Bovine Humanized Totals	572 12	329 8	113 .....	130 4	124 6	70 3	28 1	26 2	9 2	108 9	63 3	23 3	22 3	253 12	119 3	57 2	77 7	1,057 39	581 17	221 6	255 16	271			
Perry— Bovine Humanized Totals	21 4	18	2	1	10 2	9 .....	1	.....	1	14 3	9 1	2 1	3 1	48 4	40 1	2 1	6 2	93 13	76 2	7 3	10 8	18			
Piatt— Bovine Humanized Totals	151 9	83 6	26 1	42 2	66 5	39 3	11 1	16 1	3 1	60 3	37 2	8 .....	15 1	187 12	107 7	33 3	47 2	464 29	266 18	78 4	120 7	17			
Pike— Bovine Humanized Totals	200 11	111 7	36 3	53 1	82 4	51 3	11 .....	20 1	75 4	47 1	11 1	17 2	13 8	226 13	134 8	34 1	58 4	583 32	343 19	92 5	148 8	156			
Pope— Bovine Humanized Totals	6 .....	4	.....	2	2	.....	.....	2	7	.....	.....	7	.....	13 1	2 1	.....	11 .....	24 1	6 1	.....	18	.....			
Pulaski— Bovine Humanized Totals	16 1	9 1	.....	7	4	2	.....	2	7	.....	.....	3	.....	16 1	6 .....	2 1	8 .....	43 2	21 1	2 1	20 .....	20			
Totals	17	10	.....	7	4	2	.....	2	7	4	.....	3	.....	17	6	3	8	45	22	3	20	.....			



Pulnam	42	13	8	21	14	3	3	8	19	5	3	11	69	31	7	31	144	52	21	71
Bovine	1	1							5	3	2		6	4	1	1	12	8	3	1
Humanized																				
Totals	43	14	8	21	14	3	3	8	24	8	5	11	75	35	8	32	156	60	24	72
Randolph—	123	70	21	32	45	25	8	12	36	23	4	9	126	74	20	32	330	192	53	85
Bovine	8	5	1	2	4	2		2	3	1	1	1	9	4	2	3	24	12	4	8
Humanized																				
Totals	131	75	22	34	49	27	8	14	39	24	5	10	135	78	22	35	354	204	57	93
Rock Island—	525	298	163	124	114	60	32	22	110	67	25	18	276	141	62	73	1,025	506	222	237
Bovine	13	11	2		7	6		1	3	2	1		22	10	6	6	45	29	9	7
Humanized																				
Totals	538	309	165	124	121	66	32	23	113	69	26	18	298	151	68	79	1,070	535	231	244
Saline—	36	22	6	8	13	7	2	4	11	6	2	3	42	25	6	11	102	60	16	26
Bovine	2	1	1		1	1			1				2	1		1	6	3	1	2
Humanized																				
Totals	38	23	7	8	14	8	2	4	12	6	2	4	44	26	6	12	108	63	17	28
Saugamon—	167	96	28	43	70	40	12	18	61	36	10	15	170	93	29	48	468	265	79	124
Bovine	9	6	1	2	4	2	1	1	4	3		1	10	6	1	3	27	17	3	7
Humanized																				
Totals	176	102	29	45	74	42	13	19	65	39	16	16	180	99	30	51	495	282	82	131
Schuyler—	152	86	26	40	49	29	9	11	52	27	9	16	123	73	21	29	376	215	65	96
Bovine	9	6	1	2	3	2	1		3	1	1	1	7	5	1	1	22	14	3	5
Humanized																				
Totals	161	92	27	42	52	31	10	11	55	28	10	17	130	78	22	30	398	229	68	101
Scott—	25	10	5	10	10	4	1	5	15	5	2	8	55	19	8	28	105	38	16	51
Bovine	1		1														1		1	
Humanized																				
Totals	26	10	6	10	10	4	1	5	15	5	2	8	55	19	8	28	106	38	17	51
Sheddy—	116	65	21	30	58	34	9	15	58	31	10	17	204	117	35	52	436	247	75	114
Bovine	6	4	1	1	3	2		1	4	2	1	1	12	7	2	3	25	15	4	6
Humanized																				
Totals	122	69	22	31	61	36	9	16	62	33	11	18	216	124	37	55	461	262	79	120
St Clair—	856	490	200	106	301	182	61	56	217	127	47	43	503	283	132	88	1,877	1,082	412	333
Bovine	121	88	19	14	25	18	3	4	21	10	6	5	51	33	7	11	218	149	35	31
Humanized																				
Totals	977	578	219	180	326	200	66	60	238	137	53	48	554	316	139	99	2,095	1,231	477	387

Table XI.—Continued.

COUNTIES.	UNDER 12 YEARS.					12 TO 13 YEARS.					13 TO 14 YEARS.					OVER 14 YEARS.					SUMMARY.				
	Result.					Result.					Result.					Result.					Result.				
	Total.....					Total.....					Total.....					Total.....					Total.....				
	T	M	B			T	M	B			T	M	B			T	M	B			T	M	B		
Stephenson—																									
Bovine .....	211	120	6	55		66	28	11	17		68	39	10	19		232	133	40	59		577	330	97	150	
Humanized .....	14	8	2	4		4	2	1	1		4	3	.....	1		16	10	2	4		38	23	5	10	
Totals.....	225	128	38	59		70	40	12	18		72	42	10	20		248	143	42	63		615	353	102	160	
Tazewell—																									
Bovine .....	219	128	37	51		58	35	9	14		44	26	7	11		162	92	27	43		483	281	80	122	
Humanized .....	11	6	2	3		3	1	1	1		2	1	.....	1		9	6	1	2		25	14	4	7	
Totals.....	230	134	39	57		61	36	10	15		46	27	7	12		171	98	28	45		508	295	84	129	
Union—																									
Bovine .....	13	6	5	2		6	3	3	.....		1	1	.....	.....		27	17	4	6		47	27	12	8	
Humanized .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	2	.....	.....		2	2	.....	.....	
Totals.....	13	6	5	2		6	3	3	.....		1	1	.....	.....		29	19	4	6		49	29	12	8	
Vermilion—																									
Bovine .....	267	143	45	79		107	65	16	26		94	53	16	25		215	122	37	56		683	383	114	186	
Humanized .....	14	10	1	3		6	4	.....	2		5	3	1	1		11	6	2	3		36	23	4	9	
Totals.....	281	153	46	82		113	69	16	28		99	56	17	26		226	128	39	59		719	406	118	195	
Wabash—																									
Bovine .....	34	10	13	11		17	3	9	5		21	4	13	4		45	15	15	15		117	32	50	35	
Humanized .....	7	4	2	1		3	1	1	1		4	2	1	1		13	5	6	2		27	12	10	5	
Totals.....	41	14	15	12		20	4	10	6		25	6	14	5		58	20	21	17		144	44	60	40	
Warren—																									
Bovine .....	158	88	27	43		37	21	6	10		40	26	4	10		99	53	20	26		334	188	57	89	
Humanized .....	8	5	.....	3		2	1	1	.....		2	.....	2	.....		5	2	1	2		17	8	4	5	
Totals.....	166	93	27	46		39	22	7	10		42	26	6	10		104	55	21	28		551	196	61	94	

Washington—	9	6	2	1	4	4	.....	4	2	2	.....	17	10	3	4	34	22	7	5
Bovine	2	1	1	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	1	4	1	1	2
Humanized	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	11	7	3	1	4	4	.....	5	2	2	1	18	10	3	5	38	23	8	7
Wayne—	53	23	13	17	23	7	11	5	25	9	7	9	82	36	23	183	75	54	54
Bovine	6	4	.....	2	4	2	1	1	6	3	2	1	10	5	1	4	26	14	8
Humanized	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	59	27	13	19	27	9	12	6	31	12	9	10	92	41	24	209	89	58	62
White—	66	38	11	17	29	17	5	7	29	15	6	8	86	54	14	21	210	121	53
Bovine	4	2	1	1	2	1	.....	1	1	1	.....	.....	5	3	1	1	12	7	3
Humanized	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	70	40	12	18	31	18	5	8	30	16	6	8	91	54	15	22	222	128	56
Whiteside—	275	156	47	72	67	55	15	17	56	33	9	14	149	85	25	39	547	309	142
Bovine	15	11	2	2	4	2	1	1	3	1	.....	2	8	4	1	3	30	18	8
Humanized	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	290	167	49	74	71	37	16	18	59	34	9	16	157	89	26	42	577	327	150
Will—	862	496	147	216	194	115	33	46	52	86	26	40	313	187	36	90	1,521	884	395
Bovine	45	27	7	11	14	10	.....	4	8	5	3	.....	17	8	3	6	84	50	21
Humanized	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	907	523	154	230	208	125	33	50	100	91	29	40	330	195	39	96	1,605	934	416
Williamson—	11	4	1	6	11	8	1	2	6	4	1	1	6	4	1	1	40	23	5
Bovine	1	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	8	5	3	.....	10	6	1
Humanized	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	12	4	1	7	11	8	1	2	7	5	1	1	14	9	4	1	50	29	13
Winnchago—	140	78	24	38	48	28	8	12	58	32	10	16	208	128	33	47	454	266	113
Bovine	8	5	1	2	2	1	.....	1	3	2	1	.....	12	7	2	3	25	15	6
Humanized	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	148	83	25	40	50	29	8	13	61	34	11	16	220	135	35	50	479	281	119
Woodford—	161	73	27	41	44	23	10	11	42	26	5	11	105	64	18	26	352	203	89
Bovine	10	5	2	3	3	2	.....	1	3	1	2	.....	6	5	.....	1	22	13	5
Humanized	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	171	78	29	44	47	25	10	12	45	27	7	11	121	66	18	27	374	216	94

*XII.—RECAPITULATION of Results of Revaccinations, with Percentages of Typical, Modified and Bad Results, with Bovine and with Humanized Virus, at Specified Ages.*

VIRUS.	UNDER 12 YEARS.				12-13 YEARS.			
	Total.....	Result.			Total.....	Result.		
		T	M	B		T	M	B
Bovine .....	40,765	24,856	7,499	8,410	9,428	5,702	1,739	1,987
Percentages.....		60.9	18.5	20.6		60.5	18.4	21.1
Humanized.....	1,720	1,297	174	249	257	211	22	24
Percentages.....		75.4	10.1	14.5		82.1	8.6	9.3
Totals.....	42,485	26,153	7,673	8,659	9,685	5,913	1,761	2,011
Percentages.....		60.1	18.0	21.9		61.0	18.2	20.8

VIRUS.	13-14 YEARS.				OVER 14 YEARS.			
	Total.....	Result.			Total.....	Result.		
		T	M	B		T	M	B
Bovine .....	7,658	4,314	1,501	1,843	18,303	10,315	3,271	4,717
Percentages.....		56.4	19.6	24.0		56.4	17.8	25.8
Humanized.....	404	223	106	75	869	475	128	266
Percentages.....		55.2	26.2	18.6		54.7	14.7	30.6
Totals.....	8,062	4,537	1,607	1,918	19,172	10,790	3,399	4,983
Percentages.....		56.3	19.9	23.8		56.3	1.77	25.9

SUMMARY.

Total number of revaccinations.....		79,404
—    —    — bovine virus.....	76,154	
—    —    — humanized virus.....	3,250	
		79,404
Bovine virus:		
Typical results.....		45,187
Per cent.....	59.3	
Modified results.....		14,010
Per cent.....	18.4	
Bad results (or failure).....		16,957
Per cent.....	22.3	
Humanized virus:		
Typical results.....		2,206
Per cent.....	67.9	
Modified results.....		430
Per cent.....	13.2	
Bad results (or failure).....		614
Per cent.....	18.9	
Average percentages, both kinds of virus:		
Typical results.....		59.6
Modified results.....		18.2
Bad results (or failure).....		22.2



## NOTES AND COMMENTS.

A wide disparity is found to exist in the vaccinal status of different counties at the date of the Vaccination Order. Tables I and II set this forth in detail; the latter showing the extremes, in percentages, to be 2.7 $\frac{1}{2}$  per cent. protected in Johnson county, the lowest, and 70.84 per cent. protected in McLean county, the highest.\* As a rule, the strictly rural counties, those having few or no large centres of population, and remote from lines of travel, show the lowest percentages of protected at this date. Exceptions are found wherever small-pox had previously appeared, and aroused communities and authorities to the necessity of vaccination. At the date of making the returns this disparity had been very materially reduced, the extremes being Johnson, (still the lowest,) 67.58 per cent. protected, and the immediately adjoining county of Williamson which shows, relatively, the highest percentage of protected, 99.39, in the State.

A surprising large proportion of non-vaccinated children over fifteen years of age is shown, by Table IV, to have been in existence in December, 1881. Even in the city of Chicago more than six per cent. of those vaccinated for the first time subsequent to December 1, 1881, were over fifteen; while in the State at large this proportion rose to ten and seven-tenths per cent. A certain number of those in Chicago, were, no doubt, children recently removed to the city from places where vaccination before admission to school was not exacted; but making due allowance for these, there still remains a number sufficiently large to show that the requirement of vaccination before admission was not enforced as rigidly as was generally believed. This is further proven by the history of the epidemic itself. During the twelve and a-half months ended January 25, 1882, there had been 109 cases of small-pox among public scholars; and during the remaining twenty-three and a-half months there were only 137 more—showing a large reduction per month after the enforcement of the Order. Among the first group, of 109 cases, there were 21 who had never been vaccinated; while among the latter group of 137 cases, there were only 7 unvaccinated. Of these 246 cases, there were 28 who had never been vaccinated at all, and out of these 12 died; 2 had been unsuccessfully vaccinated twice each, and both died; and one

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\*For obvious reasons Cook county is omitted in making these comparisons.

other, never vaccinated until after exposure, also died—making a death-rate of forty-eight per cent. for these unvaccinated. Among the remaining 215, who had been successfully vaccinated, there were two deaths—or a mortality percentage of nine-tenths of one per cent.\*

An interesting practical point is brought out in Tables X and XII—the recapitulations of the results of vaccination and revaccination, respectively, with bovine and with humanized virus, at specified ages. In Table X, 97,771 primary vaccinations of children under 12 years of age give 7,420 failures, or seven and one-half per cent. In 56,165 primary vaccinations of children 12 years old and over, there were 5,448 failures, or nine and seven-tenths per cent. An examination of the Table shows that this percentage of failures steadily increased with the increase of ages, being eight and two-tenths in children between 12 and 13 years; nine and five-tenths, in those between 13 and 15; ten and five-tenths, in those between 15 and 18; and eleven and two-tenths, in those over 18 years of age. The average failures for all ages under 21, was eight and three-tenths per cent. In revaccinations, the percentage of failures similarly increased from twenty-one and nine-tenths in children under 12 years of age, to twenty-five and nine-tenths in children over 14 years. The average failures in revaccinations, for all ages under 21, was twenty-two and two-tenths per cent.

It is not to be assumed that, in either case, these percentages of failures represent demonstrated insusceptibility. A large proportion of them were due to poor virus; in some schools the first vaccination was almost an entire failure on account of inert virus, and there is reason to believe that in many of these cases the attempt was not repeated; while in many other cases the Supplementary Returns were not made, on account of the closing of the school-term, particularly in the southern portion of the State. Out of the total number (12,868) of failures in primary vaccinations only 2,765 cases of repeated attempts are reported. These range from 2 attempts to 14—one girl, in her seventeenth year, being reported as “vaccinated 14 times unsuccessfully since her birth.” The great majority of repeated attempts are 5, 6 and 7—1,580 cases being reported in which the operation was repeated thus often.

For the relative efficacy of bovine and of humanized virus, as shown by the proportions of typical, modified and bad results, and for many other points of interest, the student is referred to the Tables themselves.

An average of 72 in every 1,000 children, in the total number, were found to have had small-pox prior to December, 1891. In Chicago this average was greatly exceeded, rising to 86 in the 1,000; while in the State at large it was 63. The excess in Chicago is, without question, attributable to the large foreign element in the population, and the more frequent prevalence of the disease in that

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\*In the report of the Medical Officer of Health for the Privy Council, Dr. Buchanan has shown that there were 782 deaths from small-pox in London, during 1881, among 55,000 unvaccinated children, or at the rate of fourteen in every thousand; while among 861,000 vaccinated children there were only 825 deaths, or less than one in the thousand. If the 55,000 had been vaccinated, 52 only would have died of small-pox, instead of 782. On the other hand, if the 861,000 had been unvaccinated, there would have been 12,126 deaths from small-pox among them, instead of 825.

city. On the other hand, there is a marked contrast between these two divisions in respect to the ages at which the children were attacked with the disease. In Chicago only 51 cases out of the total 525, or less than ten per cent., occurred during the school-age, that is, among children over six years old; while in the State at large 570 cases, or over one-third, occurred among children of the school-age. Of the 51 Chicago cases in which the disease occurred during the school age, there were 27 cases which occurred before the children removed to Chicago, leaving only 24 cases among those actually in attendance in the Chicago schools during the sixteen years prior to the date of these returns. When these figures are taken into consideration, together with the fact already noted—*i. e.*, the prevalence of the disease in Chicago and its infrequent occurrence in the country—the contrast between the comparative immunity from small-pox of the Chicago school-population, and the comparative frequency of the disease among the school-population of the State at large, is greatly heightened, and emphasizes still more strongly the value of the Vaccination Certificate as a pre-requisite to school admission.

The notes and memoranda appended to these cases are full of interest, as showing the varying degrees of susceptibility to the variolous and vaccinal contagia. Among them are the following:

Girl, 8 years old;\* small-pox in infancy; vaccinated in 1880, failure; vaccinated in 1882, successful, producing a modified cicatrix.—Girl, *et. 8*; vaccinated in infancy; varioloid in 1878; revaccinated in 1882; typical cicatrix.—Girl, *et. 8*; small-pox in infancy; vaccinated in 1882; result, typical.—Boy, *et. 8*; small-pox in infancy; vaccinated in 1882—result, modified.—Boy, *et. 8*; vaccinated in 1878, "successful;" small-pox in 1881; revaccinated in 1882, humanized virus—result, typical.—Girl, *et. 9*; vaccinated in infancy; two typical scars; varioloid in 1878; revaccinated in 1882—result, typical.—Boy, *et. 10*; small-pox in 1874; primary vaccination in 1882—result, modified.—Boy, *et. 10*; small-pox in infancy; vaccinated in 1880—result, modified; revaccinated in 1882—result, typical.—Girl, *et. 11*; small-pox in 1872; vaccinated in 1882—result, typical.—Boy, *et. 11*; small-pox in 1874; vaccinated in 1881—result, modified; revaccinated in 1882—result, typical.—Girl, *et. 12*; vaccinated in 1878—result, "bad;" "varioloid" in 1881 (February); revaccinated in 1881 (December 21)—result, typical.—Girl, *et. 12*; small-pox in infancy; vaccinated in 1882—result, typical.—Girl, *et. 13*; small-pox in 1872; vaccinated in 1881—result, modified.—Boy, *et. 12*; vaccinated in 1874—result, "bad;" "varioloid" subsequently; revaccinated in 1882—result, typical.—Boy, *et. 13*; vaccinated in infancy; humanized virus—result, typical, two cicatrices; varioloid in 1880; revaccinated in December, 1881, bovine virus—result, modified.—Girl, *et. 14*; small-pox in 1875; vaccinated in 1882 (January)—result, modified.—Girl, *et. 14*; "successfully vaccinated first time in 1879; varioloid subsequently; revaccinated January 6, 1882—result, typical."—Boy, *et. 14*; vaccinated in 1879, primary; result, typical; "varioloid 8 days after;" not revaccinated.—Boy, *et. 14*; vaccinated in 1869; humanized virus—result, modified; varioloid in 1873; revaccinated January, 1882; bovine virus—result, typical.—Boy, *et. 14*; small-pox in infancy; vaccinated in 1882—result, modified.—Boy, *et. 14*; vaccinated in 1878—result, modified; varioloid in 1880; revaccinated in 1882—result, modified.—Girl, *et. 15*; "vaccinated in 1868 or '69; humanized virus; failure;" small-pox in 1873; vaccinated in 1881—result, typical.—Girl, *et. 15*; small-pox in infancy; vaccinated in 1873—result, modified; revaccinated December, 1881—result, typical.—Girl, *et. 15*; "pitted with small-pox"—date not given; vaccinated in December, 1881—result, typical.—Girl, *et. 15*; small-pox in infancy; primary vaccination February, 1882; bovine virus—result, failure.—Girl, *et. 15*; small-pox in 1868; vaccinated in 1877; result, typical; revaccinated January 1881—result, failure.—Girl, *et. 15*; small-pox in infancy; vaccinated in 1870; humanized virus, result, modified; revaccinated February 2, 1882; bovine virus—result, typical.—Boy, *et. 15*; successfully vaccinated in 1868; "had small-pox this winter" (1881-82).—Boy, *et. 15*; vaccinated in infancy; "varioloid subsequently, many pits still visible;" revaccinated, 1881; result, failure.—Boy, *et. 15*; vaccinated in infancy; "a smooth, flat scar;" varioloid in 1870; revaccinated in 1881; result, failure; revaccinated February 2, 1882; examined February 23, 1882—result, typical.—Girl, *et. 16*; "varioloid when 3 years old;" revaccinated, December, 1881—result, "nil."—Girl, *et. 16*; vaccinated in 1867; result, "fair;" varioloid in 1870; revaccinated, December, 1881—result, typical.—Girl, *et. 16*; small-pox in infancy; vaccinated, December 5, 1881—result, typical.—Girl, *et. 16*; vaccinated in infancy; "varioloid five years after;" revaccinated, February 28, 1882—result, typical.—Girl, *et. 16*; vaccinated in infancy; varioloid in 1870; revaccinated in 1880—result, failure; revaccinated, December, 1881—result, typical.—Girl, *et. 16*; small-pox when 8 months old; varioloid in 1882; "vaccinated successfully, with humanized

\*These are the ages at the date of examination.

†Where the kind of virus is not specified in recent vaccinations it is understood to be bovine virus.

‡"Varioloid" is used here, as elsewhere throughout this Report, to signify small-pox modified by vaccination or by a previous attack of small-pox.

virus, December 10, 1881."—Girl, æt. 17; small-pox in infancy; vaccinated, January 7, 1882—result, "successful."—Girl, æt. 17; small-pox in infancy; vaccinated in 1882—result, failure; vaccinated, February 12, 1882—result, typical.—Girl, æt. 17; small-pox in 1872; "vaccinated in the winter of 1880-81;" result, failure; vaccinated, November 20, 1881—result, failure.—Boy, æt. 17; small-pox in infancy; vaccinated in 1876; result, failure; vaccinated, February 15, 1882—result, typical.—Boy, æt. 17; vaccinated in infancy; result, "a fair scar;" varioloid in 1872; varioloid in January, 1881; revaccinated December 3, 1881—result, failure; revaccinated, January 21, 1882—result, typical.—Boy, æt. 17; small-pox in 1871; primary vaccination, November, 1881—result, typical.—Girl, æt. 18; small-pox in infancy; primary vaccination, January, 1882—result, typical.—Girl, æt. 18; "successfully vaccinated at 3 months of age; had varioloid in 1870, in 1872, and in 1876; revaccinated, November 20, 1881, and December 10, 1881—result of November vaccination, apparently a failure, but began to 'work' December 13, and both attempts succeeded, leaving one modified and two typical cicatrices."—Girl, æt. 18; "varioid in infancy;" revaccinated in 1876—result, failure; revaccinated December, 1881—result, typical.—Girl, æt. 18; "varioid in infancy;" revaccinated, February 7, 1882—result, typical.—Girl, æt. 18; "varioid in infancy;" revaccinated in 1878—result, "bad;" revaccinated, September 7, 1881—result, "successful."—Boy, æt. 18; small-pox in 1865; vaccinated (primary?) January 4, 1882—result, modified.—Boy, æt. 18; "varioid in infancy;" vaccinated, 1882—result, "one modified cicatrix;" revaccinated, May, 1880—result, "satisfactory."—Boy, æt. 18; varioloid in 1865; revaccinated in December, 1881—result, typical.—Girl, æt. 19; "varioid in infancy;" revaccinated 3 times subsequently, "without success;" revaccinated, January 12, 1882—result, typical.



## VACCINATION RECORDS AND EXPERIENCE OF PHYSICIANS.

WITH the view of obtaining the individual experience of vaccinating physicians while the facts were still fresh in mind, the following circular and postal-card blank were prepared and distributed, in March, 1882, to nearly five thousand physicians in all parts of the State:

(S. B. H., No. 66.)

ILLINOIS STATE BOARD OF HEALTH,  
OFFICE OF THE SECRETARY, SPRINGFIELD, ILL., March, 1882.

DOCTOR:—Enclosed please find a blank form for report of your recent vaccination experience, which form it is hoped you may be able to fill out and return at an early date.

It is unnecessary to dwell upon the importance and value which the publication of such information will possess, both for the profession and the public. It is believed that you fully appreciate this, and will add your contribution to the volume.

The form has been so condensed—in order to facilitate the labor of reporting—that the illustrations on the back of this note may be useful.

Very respectfully,

JOHN H. RAUCH,  
Secretary.

*If you do not use the form yourself, please hand to some one who will.*

[The illustrations referred to consisted of two blank forms, appropriately filled up, and preceded by the following explanatory note:

### ILLUSTRATIONS OF MODES OF USING THE VACCINATION RECORDS.

NOTE.—It will be understood that the figures and words or phrases printed in *italic*, in these illustrations, are hypothetical—the reporting physician will, of course, insert his own figures; give his own reasons for preferring bovine to humanized virus (or *vice versa*;) and furnish the proper address of the propagator whose bovine virus he has found most trustworthy.

Where the physician has met with *noteworthy vaccinal complications, sequela or results*, it is especially desired that these be reported separately, with as much fullness of detail as may be deemed necessary. Facts concerning reported fatal results, amputated arms, communicated disease, *et cetera*, should, in all cases, be furnished. "Facts" only can set the public mind at rest on these points.

Of more purely professional interest would be data concerning *unusual latency of virus* (as manifested by prolonged delay in manifestation of activity;) *final success after repeated failures*; *successful vaccination after an attack of variola*; *frequent successful vaccinations of the same individual*; *success of bovine, after failure of humanized, virus* (or the reverse;) *modes of performing the operation*.

Proper credit will be given, in the published report, for all information. To this end records and statements should be dated, post-office address given, and name of reporting physician signed in full.)

## POSTAL-CARD VACCINATION RETURN.

DATE:....., 1882.

SIR: During the past ..... months, I have performed vaccinations, as follows:

	Virus.	Successful.	Failures.
Primary .....	Bovine .....	.....	.....
“ .....	Humanized .....	.....	.....
Revaccinations.....	Bovine .....	.....	.....
“ .....	Humanized .....	.....	.....

[Strike out needless words and initials.]

Examined usually on..... and  
or ..... day.

Prefer B. H. Virus, because of .....

With B. V. have obtained best results with that propagated by.....

Have had <sup>some</sup><sub>no</sub> noteworthy complications and  
or results.Above data given from records,  
memory.

....., M. D.

P. O. Address: ..... Ill.

A large number of responses to the foregoing were received, and from returns by 493 physicians, an aggregate of over one hundred and eighty-seven thousand vaccinations have been summarized as follows :

Total number of vaccinations reported.....	187,223
Total number with bovine virus.....	148,328
— — — — — humanized virus.....	38,895
Relative proportions: Bovine virus....	79.22 per cent.
Humanized virus.....	20.78 per cent.
Total number of vaccinations reported.....	187,223
Total number primary vaccinations.....	128,841
— — — — — revaccinations .....	58,382
Total number of primary vaccinations reported ..	128,841
Total number successful .....	116,429
— — — — — failure .....	12,412
Percentage of successful primary vaccinations .....	90.28

Total number of revaccinations reported .....		58,322
Total number successful .....	41,729	
— — failure .....	16,653	58,382
Percentage of successful revaccinations .....		71.47

## Bovine virus:

Total number of primary vaccinations .....		93,303
Total number successful .....	82,363	
— — failure .....	10,940	93,303
Percentage of successful primary, bovine .....		88.27

Total number of revaccinations .....		55,325
Total number successful .....	39,331	
— — failure .....	15,694	55,325
Percentage of successful revaccinations, bovine .....		71.47

## Humanized virus:

Total number of primary vaccinations .....		35,538
Total number successful .....	34,076	
— — failure .....	1,462	35,538
Percentage of successful primary, humanized .....		95.88

Total number of revaccinations .....		3,357
Total number successful .....	2,398	
— — failure .....	959	3,357
Percentage of successful revaccinations, humanized .....		71.43

Relative proportions, successful and failure:		Per cent.
Primary vaccinations, successful .....		95.38
— — failure .....		9.62
— — humanized virus, successful .....		95.88
— — — failure .....		4.12
— — bovine virus, successful .....		88.27
— — — failure .....		11.73
Revaccinations, successful .....		71.47
— — failure .....		28.53
— — humanized virus, successful .....		71.43
— — — failure .....		28.57
— — bovine virus, successful .....		71.47
— — — failure .....		28.53

A very close correspondence obtains between these comparative results and the comparative results shown in the vaccination of school-children. The percentages of the two classes are as follows:

		School-children (286,165) ages, 6-21.	All ages (187,223).
Primary vaccinations, successful.....		91.65	90.38
— — — failure.....		8.35	9.62
— — — humanized virus, successful		91.72	95.88
— — — — — failure...		8.28	4.12
— — — bovine virus, successful ...		91.63	88.27
— — — — — failure.....		8.37	11.73
Revaccinations, successful.....		77.80	71.47
— — — failure.....		22.20	28.53
— — — humanized virus, successful ....		79.29	71.43
— — — — — failure...		20.71	28.57
— — — bovine virus, successful .....		77.74	71.47
— — — — — failure.....		22.26	28.53

It is to be observed, in explanation of the discrepancy above shown in the total successful primary vaccinations of the two classes, (1)—that the second class, "All ages," embraces a considerable proportion of adults, while the school-children were all under 21 years of age—a period of life during which the susceptibility to vaccination is greater than in adult life; (2)—that the exaction of evidence of successful vaccination as a condition precedent to admission to the public schools, led to a repetition of the operation (where the earlier results were *nil*.) much oftener than in the second class, and a higher percentage of successful results in primary vaccinations was thus obtained.

No such satisfactory explanation offers for the better results of humanized virus in the second class. The figures show that it was 4.16 per cent. more successful than humanized virus used upon school-children, and 7.31 per cent. more successful than bovine virus used upon "all ages." It may be remarked, however, that the percentages of success and failure in these returns (i. e. for "all ages,") cover an enormous range, and are, no doubt, in many cases, phenomenally exceptional. Thus, one reporter giving 1,250 primary vaccinations with 50 failures, claims 200 successful out of 205 revaccinations—a successful percentage of *ninety-seven and three-tenths* for revaccinations.\* Another, reporting 400 primary vaccinations, no failures, reports 310 successful revaccinations out of 320—or again over ninety per cent. of successful vaccinations.† Still others report 1,200, 1,300 and as high as 1,450 consecutive primary vaccinations without a single failure. On the other hand, 65, 68, 72 and as high as 74 per cent. of failures in primary vaccinations, and from 80 to 98 per cent. of failures in revaccinations are reported. These instances are, by no means, cited for the purpose of casting discredit upon the reports herein summarized. Wherever there was intrinsic evidence of untrustworthiness from any source, the returns have been discarded—as for example, where a reporter claimed to

\*Dr. H. K. HOWARD, of Champaign, who adds, "My revaccinations were made in a large school, the children of which were mostly of foreign parents, who had apparently, used, themselves, a very much deteriorated humanized virus in the primary vaccinations of their children, the resulting cicatrix being, in most cases, a small mark, not of characteristic appearance." See, also, extract from Dr. H.'s report, on a subsequent page.

†Dr. C. PIPER, health officer of Moline. See extract from his report on page 468.



have examined on the first or second day after the operation, or at some other totally worthless period. In cases, however, where there was no reason to doubt the intelligence and good faith of the reporter, exceptional results were not considered sufficient ground for rejection.

#### *Dates of Examination:*

Continuing the consideration of the various items of the returns, it is noted that there is a very wide range in the dates of examination, varying from those who examined only on the eight or ninth day, up to the painstaking individuals who "examined every day." In all there are 13 different dates, and combinations of dates of examinations given; but the large majority examined on the eighth or ninth and some subsequent day—so that, on the whole, the results of the vaccinations and revaccinations as given above may be assumed to be fairly correct.

#### *Bovine or Humanized—Which?*

While the physicians who express themselves as preferring humanized virus are in a decided minority, the character of the reasons assigned for the choice of bovine virus, as well as the records of the reporters, show that this apparent popularity of bovine is largely due to accident, and is seldom the result of any actual comparative test of the two kinds. For example: "Freedom from danger of transmitting other diseases," is assigned as one ground of preference for bovine virus 364 times; but in a large number of cases it is coupled with the additional reason, "because of popular prejudice;" and in other cases, with some one of the following reasons: "Greater purity," "less liability to cause doubts as to purity in severe cases," "assumed" or "reputed safety." Among the other reasons given for preferring bovine are "greater protective power," "greater uniformity of results," "fewer and less severe complications," "greater certainty," "ease and readiness of application," "convenience," "easier to obtain." In very few instances, however, do those who thus express a preference for bovine virus report having performed any vaccinations with humanized.

*Per contra*, every one of the physicians who express a preference for humanized virus, reports vaccinations with both kinds, and the assumption is that their preference, and the reasons therefor, are the result of actual experiment. These reasons, in the order of their frequency, are as follows:

1. Greater uniformity of results.
2. Less severe local and constitutional effects, with equal—or greater—or proved protective power.
3. Greater promptness of action.
4. Greater reliability.
5. Freedom from serious complications.

Tabulated in percentages, these expressions of preference give the following results:

	Per cent.
Reporters who prefer bovine virus.....	85.0
Reporters who prefer humanized virus.....	15.0

	Per cent.
Bovine virus preferred because of—	
Freedom from danger of communicating other disease..	86.6
All other reasons.....	13.4
Humanized virus preferred because of—	
Uniformity of results.....	25.0
Mild constitutional and local effects, with proved protective power.....	20.8
Promptness of action.....	19.4
All other reasons.....	34.8

Following are some of the verbatim reasons given for individual preferences:

Dr. J. M. ARMSTRONG prefers "bovine virus on account of public sentiment. Has found that it may remain latent for weeks before producing characteristic effects; also liable to produce violent constitutional symptoms." Reports vaccinations with both kinds of virus.

Dr. S. D. CARLILE prefers "bovine virus because of its uniformity of action; never used humanized virus."

Dr. W. H. CAULK prefers "humanized virus, because of better results and no serious complications." About one-third reported vaccinations, humanized virus.

Dr. D. S. CLARK prefers "humanized virus because of less severity of effects, and because it affords just as good protection as bovine virus, nor does it make the patient as sick as the bovine. If he could be certain of the purity of humanized virus, would never use bovine." For past two years has used bovine virus almost exclusively.

Dr. J. A. EDMISTON prefers "bovine virus because of more typical results; while more intense in action there is less danger of complications and better results." Reported vaccinations, all bovine virus.

Dr. R. N. FOSTER prefers "bovine virus, because of convenience, less liable to cause doubts as to purity in severe cases; sees no difference in effects of two kinds." Reported vaccinations all bovine virus.

Dr. C. A. GARNSEY prefers "bovine virus, because of its reputed freedom from danger of transmitting disease. For certain effect, and in case of emergency, should use humanized." Reports vaccinations with both kinds.

Dr. S. A. HENDRICK prefers bovine virus, because he "has always used it."

Dr. H. S. HINMAN prefers "bovine virus, because of not having had any experience with humanized virus."

Dr. W. S. HOLLIDAY prefers "bovine virus, because of convenience, and difficulty of obtaining good humanized virus." Reports vaccinations with both kinds.

Dr. C. HUTCHINSON prefers "bovine virus, because of freedom from danger of transmitting other diseases, but does not consider it of any greater potency or protective power than humanized virus."

Dr. P. M. JEWELL prefers "humanized virus, because of greater success with it; more specific course and typical scar; less number of complications and sequelæ." Reports vaccinations with both kinds.

Dr. THOS. M. MCLWAIN prefers "bovine, because of prejudices of parents and the public generally." Reports vaccinations with both kinds.

Dr. O. P. PAULDING prefers "bovine virus, because of not knowing anything about humanized virus; and, in view of the results, does not care to know anything more about bovine." Reports 262 primary vaccinations, 194 failures; 25 revaccinations, 23 failures; all bovine virus.

Dr. E. H. SAMMONS prefers "bovine virus, because of not having tried humanized virus." Reported vaccinations, all bovine virus.

Dr. J. R. SNELLING prefers "bovine virus, because of its popularity, and security to physician against censure in the event of cutaneous sequelæ; cannot be charged to transmission." Reported vaccinations with both kinds.

Dr. WILLIAM STEINBAUF prefers "humanized virus, because of the greater uniformity of results, freedom from complications, and less severity of effects." Reported vaccinations with both kinds.

Dr. J. STONEMETZ prefers "humanized virus, because of less severity of effects; protective power equally as good as bovine." Reported vaccinations with both kinds.

Dr. WM. THOMPSON prefers "bovine virus because of freedom from inoculating disease, surer results, supposed greater efficiency," and adds, "Have had but little experience with humanized virus."

Dr. J. D. WHITLEY prefers "bovine virus because of its freedom from transmitting other diseases, and believes it to be the only genuine vaccination." Reported vaccinations all bovine.

## Noteworthy Complications and Results:

Only 65 physicians\* report having had any noteworthy complications or results, and of these only 19 consider them of sufficient importance to give in detail. The principal facts are summarized as follows:

Dr. C. BARLOW reports "cutaneous eruptions in one-fifth of the cases." Used both kinds of virus.

Dr. G. R. BORRINGER: "One noteworthy case was that of a Miss, fourteen years of age. She was vaccinated and on the eighth day returned for examination, which showed plainly that there had been no effect. On the sixteenth I revaccinated her. Eight days from the second revaccination examination showed no effect. I revaccinated her the third time, and in due time the first vaccination worked perfectly. The scar is at the seat of the last vaccination, none at the others. I believe, in most cases, that continued revaccination will prove effectual at last." Bovine virus used.

Dr. P. W. BLANCHARD: Two successful vaccinations after having had variola; twenty years intervening. Bovine virus.

Dr. R. W. CHAPMAN: "I have vaccinated some seven or eight hundred, most of whom were school children and had to revaccinate a large per cent. of these; some taking after the sixth or eighth trial, with the ivory point being used to scarify. I then used a number of cambrie needles before applying the points, with better results. I then ordered some bovine crust from \* \* \*. Almost every arm vaccinated with the crusts got sore in less than four days, and at least one-third of them discharged pus destroying the tissues nearly to the bone, with an eruption resembling roseola, and accompanied with much fever lasting from four to seven days. Many arms continued to discharge pus from six to twelve weeks, though they were cleansed daily with carbolic water. The blood seemed to be poisoned for a time, yet no amputations were performed; no disease communicated. We had a few cases that 'worked' well after fifteen days, but very few 'worked' after the eighth day."

Dr. J. CHEWNING: "Have no noteworthy complications or results, but I may give the details of a revaccination performed during the past winter ('81-'82) rather as an experiment than from any belief that the person needed further protection. I vaccinated a German woman, 35 years old, who had five distinct vaccinal marks, made in Germany in childhood. Seven years ago her husband had small-pox; she nursed him, and had an attack of varioloid, with a considerable number of pustules. This revaccination, with a bovine virus quill, took in two places, producing the characteristic vaccinal vesicles, and leaving two well-defined typical cicatrices."

Dr. A. L. CLARK: Of three subjects pitted with variola, vaccination succeeded in one instance. Success followed the third or fourth trial in a number of primary vaccinations. Bovine virus used.

Dr. A. T. DARRAH: "One successful vaccination after having had small-pox, one successful vaccination, after failing with bovine, by using humanized virus. In eight cases a very extensive rash appeared about the tenth to twelfth day. This was almost invariably mistaken for chicken-pox. The rash, however, was finer, and the redness of the skin more diffuse. In all these cases the patients were very sick. In a number of cases there was extensive sloughing. This occurred in scrofulous and debilitated persons. Fungous growths interfered with the healing process in a number of cases. The youngest vaccinated was six weeks old. The oldest was seventy-three years old. In the case of the one who had had small-pox, the result was typical and rather severe. The inflammation extended to the wrist, up over the shoulder and down on the side of the chest. In 1865, he and two sisters had small-pox, while the father and mother had varioloid. They were all marked, more or less; one of the sisters very badly. In every instance of successful revaccination, humanized virus had been used from one to fifty years before."

Dr. CHAS. B. FRY: "Of the twenty-five or so, reported as failures, in primary cases, the majority were so considered because after three or more operations the children did not return. I vaccinated in one instance eight times and was finally successful. I have used no humanized virus for the past five years and have never heard a word of complaint from any one whom I have vaccinated. I have not been obliged to treat, in any way, the sores produced by the virus used by me, while I have treated many horrible sloughing ulcers produced as I had every reason to believe, by humanized virus. In quite a number of instances, especially in revaccinations in adults a fleshy or pink-colored excrecence would form at the point where the lymph was inserted, sometimes as late as the twelfth or fifteenth day, often earlier, which would become a firm crust and leave a marked cicatrix. Subsequent vaccination would produce no results. I do not remember to have seen this before this year."

Dr. F. K. HILL: "Had two cases of axillary abscess from vaccination; neither case was vaccinated by me, but the parents told me that points were used. Both cases resulted favorably after being lanced. I also had perhaps half a dozen cases where the vaccination sore was a long time healing, the crust coming off repeatedly and leaving a deep ulcer. In one case it was five months before it could be healed, the case presenting no constitutional or other symptoms, and in a previously healthy child. Had one case of primary vaccination which was finally successful after repeating the operation three times. Have had no experience with humanized virus."

\*Among those whose returns have been accepted.



Dr. H. C. HOWARD: "In the way of complications, about one in twenty would have a full vaccinal rash, four of which have left fine marks on various parts of the person, notably on the face. A large majority of the cases had very severe fever from one to five days. Three have had abscesses following, and one has had erysipelas inflammation. The complications were as common in revaccinations as in primary. Had thirty cases of vaccination of persons who had previously had varioloid, when children, either naturally or by inoculation. One child of nine years has been vaccinated four times and has had varioloid; marks well as often as vaccinated. Mother died from varioloid, and the boy is, and probably always will be, liable to the disease. Bovine virus used in 1,455 vaccinations and revaccinations."

Dr. THOS. T. HOWARD: "During the past winter, while in a few instances the arms were very sore, requiring careful dressing, none have been very severe. The most remarkable feature was an amount of sickness during the working of the virus, which I never witnessed before. It seemed as if a variolous miasm gave potency to the vaccine virus, as occurs, sometimes, in cholera and other epidemics. In one of these cases, a striking resemblance to variola was developed. The winter of 1880 and 1881 developed more trouble with the arms. In a few instances very careful dressings, and medication for a month were required to save the limb. These occurred where a scrofulous diathesis was predominant, yet all resulted in perfect cure. In some of my cases during the past winter, there was evidence, both oral and ocular of vaccination within two years; but the virus worked as if cases were primary. Often not until the third trial did the virus develop, while in one case the fourth trial secured the desired result. I can give no comparison between bovine and humanized virus, having never used the latter. In one case the subject had varioloid eleven years ago; notwithstanding which the vaccine virus gave a typical result. As to the time of commencing to work, the greatest possible difference obtained. Three days would develop a sore arm, in one case, while another in the same family, vaccinated at the same time, with the same virus, would remain latent from six to ten days. Less than half the vaccinations in this place were made by medical men. This I consider the weak point in the present laudable endeavor of the State to stamp out variola. A large portion of these home vaccinations, I have no hesitation in stating, from considerable observation, afford no protection whatever. Upon exposure variola will be contracted, the blame resting unjustly on the insufficiency of vaccination to protect."

Dr. F. W. MAJER: "In one family of Germans, I vaccinated four children four times successively, taking every possible pain, and each time with bovine virus which proved successful with others vaccinated at the same time and under the same conditions. The father of the children then told me that he had been vaccinated several times, and it had never taken. He also informed me that when he was a young man he occupied the same room with a man who was sick, and after waiting on him for three or four days the sick man was literally covered with an eruption which proved to be the small-pox. Supposing he could not now take the disease, he continued waiting on the patient, procured his meals and took them to him until he got well, and did not have the disease, and says he never was sick in his life. Having failed to bring the children under the influence of the virus, I concluded there was a constitutional peculiarity, probably hereditary, as the cause of my failure."

Dr. A. K. MORELEY: "I have not used humanized virus enough to enable me to compare its merits with bovine virus. Have used bovine virus from two or three firms, with similar results. In three cases vaccination has been followed by a distinct general eruption. In one case of successful vaccination, the child had been vaccinated, one year previous, successfully. In a large proportion of the successful cases the local and general effects have been very severe. By 'successful' here I mean the cases in which it 'took,' (to use a popular term), for I find very few cases successful according to the standard given in school certificates, i. e. pitted. In short, the swelling has been great, suffering ditto, and results, not first-class."

Dr. C. PIPER: "I have never seen vaccination so successful as during our last small-pox epidemic here; there seemed to be a general susceptibility; primary vaccinations were all successful either after the first or second vaccination. In revaccinations, in some instances, I had to repeat the operation two or three times; one person I vaccinated six times before it proved successful. Of the number revaccinated, about 300, there were not over ten failures. I vaccinated six persons who previously had had small-pox from 12 to 24 years ago, and in every instance the typical vaccine vesicles were produced. I know of no bad results from vaccinations by bovine virus in my own practice, nor of any in the practice of the other physicians in this city. We are prohibited, by an ordinance, from using any lymph but the bovine."

Dr. T. J. PITNER: "My experience this year with bovine virus has been unsatisfactory. The virus supplied by several dealers has been imperfect, in some lots wholly inert. In some lots bad and good points have been mixed. It has become too much a matter of trade, and the cupidity of dealers has demoralized the business. There is no certainty as to a new lot of points, and in the presence of danger we are unarmed. Inert and inferior points have been sent to physicians here repeatedly this year, by widely known dealers. I have known of 100 points used immediately upon arrival, without a single success. I procured one package from \* \* \*, using all the next day; not one took, although a number were primary vaccinations. \* \* \* I have been humiliated by frequent failures with the bovine point, and outraged by the imposition of poor virus; and unless uniformly active matter can be obtained readily, we must return to the use of humanized virus. The popular prejudice against it is groundless. The pure lymph from a typical vesicle on the eighth day is the best material, certain, safe, and comparatively uniform in its action."

Dr. JAS. Y. REAT: "Two young men, students, aged 19 and 21 years respectively, were vaccinated by myself with bovine virus during their treatment, by the use of bromides for spermatorrhea; examination of both cases on the eighth day; in the younger of the two a small papular elevation only was to be seen where the virus had been introduced into



the arm. I then vaccinated again higher up on the deltoid. Eight days subsequent to this date I examined both cases again. In the junior I found two vesicles where the first and second vaccinations had been made, and both passed through their stages synchronously. In the case of the senior no repetition was called for; but the symptoms and sequelæ were alike in both cases. On the twenty-fourth day from the first vaccinations, an annoying and obstinate papular affection, a severe attack of lichen agrius, recognized by pin-head or minute, dry, hard and red elevations over the entire body, made its appearance. The papules developed such an inflamed appearance as to simulate erysipelas, especially over the left arm, in which the vaccine virus had been introduced. An exudation of sero-purulent fluid made its appearance through large claps or abraded surfaces, and gave rise to painful pruritis. A pyretic condition of the system prevailed for a period of two weeks, with occasional gastric disturbance. The furfuraceous desquamation of the cutaneous surface was ten days over the vaccinated arms, which were badly swollen from the shoulder to the finger tips. I am satisfied that no relation of æne, which often so closely resembles the papular and pustular syphilodermata, existed, and that the acneiform eruption resulting from the ingestion of the bromides could be discriminated."

Dr. W. O. SKINNER: "I had a student from Keokuk who had been vaccinated repeatedly by his physician without effect, and also by me without good results, until I vaccinated him upon the leg, when it took to perfection, demonstrating that it is likely to take upon other parts of the body when it fails upon the arm. We have had cases here that have been vaccinated eight or ten times without good results. The people have been much opposed to the use of humanized virus, fearing that disease might be transmitted to them; so very little humanized virus has been used in this community. I did some arm-to-arm vaccinating and without a failure, that I know of, demonstrating that as the surest way of getting good results."

Dr. W. H. SPARLING: "We vaccinated many hundreds, using almost altogether bovine virus. The results in children previously unvaccinated were generally satisfactory, though much slower than humanized in its operation. There were a great many failures, however, and some required to be revaccinated three or four times. In adults who had formerly been vaccinated, the bovine virus was remarkably unsuccessful in cases which subsequently yielded readily to humanized virus. We had some pretty sore arms, it is true, as results of vaccination, but no such terrible cases as are reported from other quarters, none requiring amputation, or anything approximating that in severity. Nothing, indeed, which could not be attributed to a strumous diathesis, or ill-health at the time of vaccination. In my experience, the most severe in its operation is humanized virus which is a direct result of vaccination with bovine virus; in other words, humanized matter which is one remove from the heifer. I can sincerely say, that, comparing my late experience with bovine virus, with all my former experience with humanized virus, I have failed to detect in the former any deleterious effects, such as blood-poisoning and the like, and must consider it safer in every respect than the latter; the only objection to its general use being that it is so much slower in its operation, and so much more uncertain to produce any effect. In a case of emergency, I think humanized virus should be relied upon, if obtainable. Now, with respect to all the cases of vaccination with bovine virus coming under my observation, one thing was remarkable, that in no instance, no matter how serofulons the individual might naturally be, was there the sign of any local or general poisoning from the virus, unless there was proved to be a susceptibility to its action by a more or less typical result of vaccination. If the vaccination failed to take, the scratches or abrasions would heal up completely, in a few days; and that, too, in persons in whom slight wounds were none too apt to heal kindly. I think the experience of very many physicians will bear me out in this; and it was a very common remark during the epidemic, that if the bovine virus would do no good, it certainly would do no harm. Such having been my own experience, I cannot but feel incredulous when we are told of the terribly poisonous nature of the matter that we have been using in vaccinating our patients."

Dr. GEO. SUMRALL: "There were some points sold here on which the matter was brown enough to be called mahogany. There were some severe complications in the city. My twenty-sixth primary failed, but his brother, vaccinated at the same time from opposite side of quill, had a typical sore; the second vaccination gave a typical result. In primaries, had to vaccinate 4 twice, 2 three times, 1 five times, but by these vaccinations my results were made perfect, even to affecting the axillary glands. I am 47 years old; was successfully vaccinated at 8, at 38, and again last winter, to very positively affecting the axillary glands on both sides. In one vaccination, the fourth day showed positive mark of success. In very many (my own for one), positive mark of success did not appear before the fourteenth day; in two cases on the sixteenth, and in one on the eighteenth; all of which ripened into typical fever and soreness of axillary glands, leaving typical marks. Vaccinated one after varioloid, two after variola; all failures."

Dr. J. P. WALKER: "Have met with more than the usual number of herpetic and erythematous eruptions, and in two cases vaccine pustules over various parts of the body."

### *Vaccinal and Post-vaccinal Erysipelas:*

It is a noteworthy fact that in the reports of over one hundred and eighty thousand vaccinations—in thirty-nine thousand of which humanized virus was employed—only four cases of erysipelas following vaccination are reported. That very many more cases occurred may, possibly, be true; but, if so, the failure to note them, when such minor complications and sequelæ as lichen, herpes, urticaria, eczema, erythema, roseola, maculæ, bullæ and other eruptions;

inflamed and suppurating glands; otitis, abscesses, indolent ulcers, etc., are all reported, suggests a doubt concerning the reputed frequency of vaccinal and post-vaccinal erysipelas.

One of these erysipelas cases, which caused considerable excitement and, for a time, arrested vaccination in the locality, was thus reported to the BOARD:

LITCHFIELD, ILL., Feb. 23, 1882.

JOHN H. RAUCH, M. D., *Secretary State Board of Health:*

DEAR SIR: In the *Globe-Democrat* of the 16th, under the alliterative caption, "Virulent Vaccine," appears a dispatch from this city, wherein is related that Miss C. G. died from the joint effects of overheating while dancing, exposure and vaccination. I am informed that the parties sending dispatches do not furnish the head-lines. These are made up in the newspaper office to suit; but, in my judgment, the dispatch in this instance did not justify the startling head-lines.

Miss G., I am informed, applied for vaccination to Dr. Strafford, at the time of her menstrual period. He advised her to wait, but she determined to get through with the vaccine disease in time to attend the ball and refused to wait. He vaccinated her and the arm was very sore when she went to the ball. She became very much heated, and soon after the arm inflamed and became exceedingly painful, and, in short, manifested all the symptoms of erysipelas. The symptoms were detailed to me by the sister of charity who nursed her. This sister had also been vaccinated, and the disease was well developed when she was nursing Miss G. At this time her arm is very much inflamed, swelled and painful. I have not examined it, but her physician, Dr. Colt, assures me that she has not erysipelas. Immediately after nursing Miss G. this sister had charge of an old lady in the hospital, who has a tumor with a large ulcerative surface. It was her duty to wash and dress this tumor once or twice a day. And now the old lady has erysipelas, extending from this tumor over the scalp and face.

In view of these facts, I think it is a fair presumption that Miss G. died of erysipelas following vaccination and, in a measure, the result of vaccination. Perhaps a better presentation of all the facts in the case might lead to a different conclusion.

In this connection I wish to speak of what seems a well authenticated case of amputation following vaccination.

A young man of this county, named A. P., returned home from Jacksonville, where he was attending school. His uncle, R. N. P., informed me that his nephew had a terrible arm from vaccination, and that two of his classmates, who were vaccinated at the time he was, had each lost an arm in consequence.

A sister of charity, a nurse in the hospital here, and recently from Springfield, relates a similar case as occurring in that city.

These stories are probably the result of misinformation, but they have a bad influence here. To-night I visited a family of four children of ages from 1½ years to 11 years; none of them vaccinated. The parents were advised, in view of Miss G.'s death, not to vaccinate.

Yours respectfully,

H. H. Hood, M. D.

Correspondence with the other physicians mentioned in the above has failed to elicit any further facts. Dr. Stratton discredits the amputated arm story in toto; and it has been found impossible to learn the names or residences of the Jacksonville students, the names of the surgeons who performed the operations, or anything else to corroborate the story. It is positively certain that there was not the shadow of a foundation in fact for the statement concerning "a similar case" in Springfield—whether the "case" refers to erysipelas or amputation.

### *Amputations, Death, and other alleged Vaccinal Disasters:*

As to the other alleged cases in which amputation was rendered necessary; in which tetanus supervened; or death, in some other way, followed vaccination, the contradicting evidence is of both kinds, negative and positive. There is an utter absence of any original reports sustaining these alleged cases. It is true that the BOARD frequently, during the progress of the epidemic, received communications, both from medical men and the laity, depicting a terrible condition of affairs, *re* vaccination; but it is also true that such communications either referred to some other place, never the one whence they were written, or to some other person, never to the

writer or to any one under his immediate observation.\* Scores of this kind of report were received, and were, in every instance, investigated, and in every instance disproved. If any case of amputation or death was occasioned by vaccination during the late epidemic, the facts have been successfully withheld from the knowledge of the Board, notwithstanding its vigilance and earnest efforts to become familiar with every phase and isolated fact of the subject.

Probably the best sustained and most widely credited "vaccination horror," as it was called in the public press, which occurred during this period, was that located in Wayne county, the details of which are here given as fairly illustrative of several features, and as the solitary exception in which correspondence elicited a reply from one who claimed to have personal cognizance of the fatal effects of vaccination. Merely premising that reports from several sources had been received to the effect that two prominent citizens of Wayne county had died, and several other persons were dangerously ill, from the effects of vaccination, the following correspondence tells the story more graphically and instructively than is possible in a condensation. The first letter was sent in duplicate to the physicians in the immediate vicinity of the reported "horror:"

ILLINOIS STATE BOARD OF HEALTH.

OFFICE OF THE SECRETARY, SPRINGFIELD, ILL., July 26, 1882.

DEAR DOCTOR:—Will you kindly furnish this office with a brief report of your recent vaccination experience, for which I enclose you a blank form on postal-card.

A statement has been received to the effect that a man named A. B. Porter, aged 48, recently died in Lamard township, Wayne county, from the effects of vaccination; that another by the name of Cisne is supposed to have died from the same cause; and that several others were made very sick—one girl, aged 19, still remaining under treatment.

It is very important that such cases be reported fully—in addition to the report on the postal-card—and you are relied on as a leading practitioner to furnish the facts so far as they have come to your knowledge.

Very respectfully,

JOHN H. RAUCH, M. D., *Secretary.*

[*Response No. 1.*]

PLEASANT GROVE, Wayne county, Ill., August 1, 1882.

DEAR DOCTOR: \* \* \* On the 15th of February, 1882, I was called to visit one of John W——'s girls, aged about 17 years, very sick. I saw her. She was sitting in an arm-chair by the fire. I inquired why she was not in bed. They said she could not lay down; that she would smother to death; that they had to carry her out-doors to get her breath. She could whisper. I examined the throat. It was very sore, tonsils swollen. I immediately applied a large mustard-plaster to the neck; made it very red; then removed the mustard and put on a large blister-plaster. Then I had time to talk. They said she had been vaccinated some two or three weeks previously; that she took a chill, then fever; had been up and about part of the time, but had some fever nearly every day since; had been very bad one or two days. This girl was not healthy at best; rather scrofulous. They said she could not be cured with this mustard and blister. Her throat improved rapidly; in one hour she could lay down on the bed and sleep. I gave her no opiates. It was the inflammation of the lungs and throat. I gave her a little stimulants, plenty of quinine, etc. She improved well and got well. I treated the case but three days. On the 15th of the same month, I was called to the same house to see another one of the girls, aged about 19, healthy, intelligent and nice girl, the pride of her parents. She was in bed, very cold and sweating; had been suffering all night; had but little pulse, and was sinking very fast. There was terrible congestion of all the internal viscera. She could talk feebly, part of the time frenzy; said she was dying, and it looked like it. They told me she had been vaccinated when the balance of the family were; that she took a chill, then fever, and fever every day since, but could be up part of the day until the 4th; she got terribly bad. But now to the remedy; first, a large dose of alcohol, then mustard to the arms, legs and stomach, large doses of quinine, with ginger. She improved, got stronger in 40 minutes, and continued better. In about 8 hours got the body warm, the blood to circulate. After remaining with the girl about 8 hours I had to leave to see another sick girl. Dr. Johnson had been sent for before I left and got there very soon after. I returned in 3 hours. Johnson was there; the girl was warm. I gave the case to him and left, and saw the girl no more until about 3 months. Johnson treated the case several weeks. I heard from the girl to-day; she can sit up a little, but has lost her mind, demented and

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\*With the exception below given.



gone to a skeleton; will likely soon find her way to an asylum or the grave. What was the matter? Blood poisoning—of what kind no one knows. But to the case, No. 3. R—P—, healthy, about 17 years of age; was vaccinated; took chill and fever, as usual; some days nearly well, then down with fever, and thus continued, all irregular. I was called. The girl had high fever, next day nearly well, next day worse. I gave her medicine about 7 days and left her as I found her: could sit up part of every day; she got well soon; that is, the disease became exhausted. I had just as well poured all the medicine on top of her at once. Case No. 4—Rush Porter, aged 48, stout; had been vaccinated; took chill, then fever; had fever for a few days, then got better; could work a little; took down again very bad; chill all day, then fever, puking terribly. I saw him; he was wild with fever; no pain, but felt sick all over; he said "sick enough to die, sick from head to foot." This sickness continued with him till death; he breathed very rapid, like one had been running; his pulse ran to 120. I gave him medicine every two hours for about 7 days and nights; could not tell that it either did him good or harm. The fever was as irregular as the wind, and like the wind took down its tree. He spit up a great deal of thick copper-colored mucus, pale or dingy red, not pus, not blood, but the like of which I never saw before. The disease attacked the general system, fell heavy on the stomach, then the lungs, then the brain. I have seen a great deal of cholera, small-pox, milk-sickness, nearly all types of fevers, but what was the matter with Porter? Blood poisoning—what kind—no one can tell. The first case fell heavy on the throat and lungs, but got well. The second fell heavy on all the internal viscera, then closed in on the brain and ruined the mind. The third it tormented for weeks, then became exhausted. The fourth set heavy on the general system, then the stomach, lungs and brains are killed. I went to see others, but they were unimportant. I lost but one. I saw arms till I got tired of looking at them, but never saw but two pustules that looked like small-pox. It is supposed that James Cisne died from being vaccinated, but I did not see him, and can't tell. We can starve out the small-pox, but please leave vaccination alone in back counties. It hardly ever reaches here. People in cities should be vaccinated, I think. Did this virus come from small-pox, gonorrhoea, syphilis, scrofula and fistulous, or dead sheep?

DR. J. B. MANAHAN.

[Response No. 2.]

PIN OAK, Ill., July 31, 1882.

MY DEAR SIR: I was the consulting physician in the cases of Rush Porter and J. M. Cisne, both of Arrington township and not of Lamard.

Rush Porter died of typhoid pneumonia. Examined his arm three weeks after vaccination and found a good healthy scab, just ready to drop off. Also saw the scar just previous to his death; it was round, well pitted and healthy, and don't consider that it had anything to do with his disease or death.

J. M. Cisne died with double pneumonia. Had been vaccinated some two or three weeks previous to his death, but was in nowise troubled with his vaccination. Dr. A. S. Robertson, his attending physician, will confirm this statement. Never having seen the 19-year old girl referred to, I cannot give any reliable statement as of my own knowledge. I had a talk, however, with her physician, Dr. Kelso, who said she had tubercular meningitis, being of ——— parentage, and that vaccination had nothing whatever to do with her present condition.

Very respectfully,

W. S. THARP, M.D.

The other replies are simply corroborative of Dr. Tharp's statements.



## VACCINATION IN PUBLIC INSTITUTIONS, ETC.

SUPPLEMENTING the order of the BOARD, dated January 10, 1882, and requiring that all persons in attendance at State universities, colleges and schools; and all inmates of asylums, alms-houses, jails, and kindred institutions, be forthwith vaccinated or revaccinated, as the case may be, with as little delay as possible, the following form was prepared and distributed:

## PERSONAL CERTIFICATE OF VACCINATION.

ILLINOIS STATE BOARD OF HEALTH.—No. 56.

(1).....ILL., (2).....1882

I HEREBY CERTIFY, That I have this day examined.....  
aged (as stated): (3) .....years, .....months; and pronounce (4) <sup>him</sup><sub>her</sub> in my judgment, properly protected from SMALL-POX by reason of (5).

- (A) Successful *recent* primary vaccination.  
(B) Successful *recent* re-vaccination.  
(C) Unsuccessful *recent* attempts at vaccination which demonstrate insusceptibility  
(D) Previous attacks of small-pox or varioloid.

(6) .....M. D.

1—Name of city, town or village. 2—Date. 3—Age in years and months. 4—Strike out superfluous pronoun. 5—Check the initial, "A," "B," "C" or "D," which indicates the "reason." If it be "C," insert number of attempts. ~~At~~ At the present time (winter of 1881-2) no person over the age of puberty should be considered "properly protected" who does not come within one of these four definitions,—using the word "recent" to imply that the operation has been performed since January 1, 1881. 6—Signature of certifying physician, who should in all cases be a legally-qualified practitioner.

This Certificate was intended to be furnished to the individual whenever he or she left the institution, while the stub or counter-foil (see below) was retained by the vaccinating physician, from which to make up his report to the STATE BOARD OF HEALTH.

[ Stub or Counter-foil. ]

MEMORANDA OF  
PERSONAL CERTIFICATE OF VACCINATION,  
ILLINOIS STATE BOARD OF HEALTH.—No. 56.

1. ....		Illinois.
2. ....		1882.
3. { Male. ....	4. { AGE: .... yrs. .... mos.	5. { Protected by A. B. C. D.
3. { Female. ....		
6. ....		M. D.

*Certifying Physician.*

1—Insert name of place. 2—Date. 3—Strike out superfluous word "male" or "female". 4—State number of years and months. 5—Indicate "reason" assigned by checking the proper initial; if this be "C", write under the letter the figure showing the number of unsuccessful attempts. 6—If the examinations are all made by one physician, he need sign only two stubs in each block.

If the persons examined are all in one town the name of the town need be given only twice in each block.

If they are students, or others, at a private school or academy, or at a college or university; or inmates of a public institution; or employes of a corporation, manufactory, etc., the designation of such educational establishment, public institution, corporation, manufactory, etc., should be stated on at least two stubs of each block. The certificates are furnished only on condition that these stubs, properly filled out, be returned to the *Secretary, State Board of Health, Springfield, Ill.* Physicians who desire to retain a set of the stubs may obtain duplicate blocks by addressing the *Secretary*.

In addition to the State institutions, these certificates, mounted in blocks of 25s, 50s and 100s, were furnished, on application, to private and parochial schools, colleges, academies, etc., to railroad, steamboat and other officers, and to a large number of employers of various kinds. From the State institutions there were returned reports of 5,988 individuals, and from other sources 12,720 additional, making a total of 18,708. Of these there were protected against small-pox by reason of—

	Number.	Per cent.
(A) Successful recent primary vaccination.....	7,335	39.21
(B) Successful recent revaccination.....	8,016	42.85
(C) Unsuccessful recent attempts at vaccination which demonstrate insusceptibility.....	2,567	13.72
(D) Previous attack of small-pox or varioloid...	314	1.68
(A-B) Successful recent primary vaccination and revaccination.....	367	1.96
(A-D) Successful recent vaccination after previous attack of small-pox or varioloid.....	109	.58

The only feature of the above figures which seems notable, is the large number of cases of previous attacks of small-pox or varioloid. Taken together, group D—"protected by previous attack," and group A-D—"protected by successful recent vaccination after previous attack," aggregate 423 cases of previous attacks of small-pox out of a total of 18,708 individuals, or more than two and one-quarter per cent. Compared with the public school-children, this is seen to be an enormous excess. In the State at large the proportion of such

cases is only nine-tenths of one per cent., while among the Chicago scholars it is even less—.86 of one per cent. The disparity is undoubtedly due to the classes comprised in the returns from the State institutions—the defective, dependent and delinquent classes.

The average number of unsuccessful attempts at vaccination held to demonstrate insusceptibility is only 2.98; a very large number were attempted only twice, and very few five times or more. In view of the results in private practice, this average can hardly be regarded as satisfactory, and it is possible that a considerable number of those attempted two or three times only, are still susceptible to small-pox.

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# LIST OF PHYSICIANS CONTRIBUTING TO THE TWO PRECEDING SECTIONS.

Name.	Postoffice Address.	County.
ALBIN, GEO. W.	Neoga	Cumberland
Alexander, H. W.	Mokena	Will
Allen, W. A.	Palmyra	Macoupin
Allen, W. H.	Pekin	Tazewell
Allen, Z.	Newton	Jasper
Anderson, L. W.	Hoopeston	Vermilion
Appling, B. Z.	LaSalle	LaSalle
Armstrong, C.	Carrollton	Greene
Armstrong, J. M.	Edwardsville	Madison
Austin, Silas A.	Rockford	Winnebago
BAKER, D. B.	Quincy	Adams
Bannister, T. O.	Odell	Livingston
Barlow, C.	Eaton	Crawford
Barnes, A. T.	Bloomington	McLean
Barney, G. H.	Waukegan	Lake
Barry, E. L. H.	Jerseyville	Jersey
Bassett, H. J.	Tuscola	Douglas
Baxter, W. W.	Hersman	Brown
Becker, Wm.	Mokena	Will
Bennett, Robert F.	Litchfield	Montgomery
Bevier, J. D.	Loda	Iroquois
Blackford, E.	Mt. Erie	Wayne
Blackman, Orville B.	Dixon	Lee
Blanchard, P. W.	Sharon, Wis.	Champaign
Bogue, Roswell G.	Chicago	Cook
Borringer, G. B.	Alden	McHenry
Brewer, J. W.	Monmouth	Warren
Broffett, Jas. H.	Paw Paw	Lee
Brother, Ferd.	Bunker Hill	Macoupin
Brown, Geo. W.	Rockford	Winnebago
Brown, H. B.	Lincoln	Logan
Brown, I.	Milford	Iroquois
Brown, P. L.	Jacksonville	Morgan
Bruce, W. W.	Casey	Clark
Burlingame, E. D.	Elgin	Kane
Burridge, E. H.	Erie	Whiteside
CADY, JAS. R.	Oakdale	Washington
Carlile, S. D.	Palmyra	Macoupin
Carr, C. R.	Bloomington	McLean
Carr, J. C. D.	Gallatia	Saline
Carriel, H. F.	Jacksonville	Morgan
Carver, Wilson C.	Bruff	Scott
Catherwood, Thos. L.	Shelbyville	Shelby
Catlin, Ed. P.	Rockford	Winnebago
Caulk, W. H.	Cottonwood	Bond
Chaffee, H.	Tolono	Champaign
Chapman, R. U.	El Paso	Woodford
Chenoweth, Cassidy	Decatur	Macon
Chenoweth, W. J.	Decatur	Macon
Chewning, J.	Renault	Monroe
Church, Nelson H.	Chicago	Cook
Clark, Anson L.	Elgin	Kane
Clark, C. M.	Galva	Henry
Clark, D. S.	Rockford	Winnebago
Clark, Jas. B.	Seymour	Champaign
Clark, L. H.	Decatur	Macon
Cleveland, E. F.	Dundee	Kane
Cline, A. M.	Murrayville	Morgan



## List of Physicians—Continued.

Name.	Postoffice Address.	County.
Cole, N. B.	Bloomington	McLean
Conibear, W. H.	Morton	Tazewell
Cooper, Chas. N.	Batavia	Kane
Cooper, E. S.	Galesburg	Knox
Copestake, J. C.	Wyoming	Stark
Cox, W. M.	Mt. Sterling	Brown
Craig, G. G.	Rock Island	Rock Island
Crist, H. C.	Bloomington	McLean
Crow, J. T.	Carrollton	Greene
Cunningham, —	Charleston	Coles
Curtiss, R. J.	Joliet	Will.
DARRAH, A. T.	Tolono	Champaign
Davis, Jas. M.	Carrollton	Greene
Davis, Wilson H.	Chicago	Cook
Dawson, L. M.	Bloomington	McLean
Day, Ebenezer	Grand Tower	Jackson
Deming, H. H.	Pana	Christian
DeVeny, S. C.	Chicago	Cook
Delf-nbacher, P. C.	Havana	Mason
Dodge, W. F.	Earlville	LaSalle
Donaldson, H. C.	Morrison	Whiteside
Drew, A. M.	Weldon	DeWitt
Drude, Francis	Quincy	Adams
Dunn, Jeff.	Bloomington	McLean
Dunn, N. A.	Bloomington	McLean
Dunning, T. M.	Rose Bud.	Pope
Duvall, P. M.	Campbell	Coles
EDMISTON, J. A.	Clinton	DeWitt
Elder, W. A.	Normal	McLean
Ellingwood, F.	Mainteno	Kankakee
Evans, Perry M.	Minonk	Woodford
FALLER, A. B.	Newton	Jasper
Finley, J. H.	Streator	LaSalle
Fitts, A. A.	Batavia	Kane
Fitzpatrick, J. A.	Lemont	Cook
Follett, O.	Normal	McLean
Foots, Geo. W.	Galesburg	Knox
Foster, R. N.	Chicago	Cook
Fraser, W. P.	Coleta	Whiteside
Friend, William	Mier	Wabash
Fritzer, G. W.	Tower Hill	Shelby
Fry, Chas. B.	Mattoon	Coles
Fyke, J. J.	Odin	Marion
GALE, F. C.	Lacon	Marshall
Garnsey, C. A.	Batavia	Kane
Gault, Hugh L.	Oakdale	Washington
Gilbert, H. V.	Moumouth	Warren
Girtin, W. C.	Towanda	McLean
Gladson, M. M.	Hoard	Clay
Goldsmith, D. B.	Ramsey	Fayette
Goodbrake, C.	Clinton	DeWitt
Graham, Jno. J.	Cartersville	Williamson
Graves, E. H.	Bloomington	McLean
Grove, W. A.	Gaiva	Henry
Guthrie, Wm. E.	Bloomington	McLean
HAERING, T.	Bloomington	McLean
Hamilton, B. F.	Dallas City	Hancock
Hamilton, B. R.	Nauvoo	Hancock
Harris, W. H.	Old Ripley	Bond
Hathaway, J. C.	Ottawa	LaSalle
Hendershott, John T.	Enterprise	Wayne
Hendricks, S. A.	Henry	Marshall
Hester, W. W.	Anna	Union
Hicks, W. F.	Raymond	Montgomery
Hill, M. Jasper	Sterling	Whiteside
Hill, F. K.	Rockford	Winnebago
Hill, Wm.	Bloomington	McLean
Hirman, H. S.	Newton	Jasper
Hoffman, J. A.	Mendota	LaSalle
Holliday, W. S.	Moumouth	Warren
Hood, H. H.	Litchfield	Montgomery
Hostetler, W. B.	Decatur	Macon
Howard, H. C.	Champaign	Champaign

*List of Physicians—Continued.*

Name.	Postoffice Address.	County.
Howard, Thomas D.	Hinsdale	DuPage
Hubbard, H. C.	Normal	McLean
Hubbard, Silas	Hudson	McLean
Huddleston, Jno.	Crab Orchard	Williamson
Hughes, John Owen	Norwood Park	Cook
Hull, M. D.	Arrowsmith	McLean
Hutchinson, C.	Champaign	Champaign
INGERSOLL, Ellen A.	Canton	Fulton
Ingles, J. A.	Morea	Crawford
Ingraham, Sereno W.	Chicago	Cook
Inskeep, James E.	Fairfield	Wayne
JEFFRIES, John A.	Rinard	Wayne
Jewell, P. M.	Lyndon	Whiteside
Jewett, D. L.	Watseka	Iroquois
Johnson, B. F.	Colchester	McDonough
Jones, W. H.	Henry	Marshall
KEENER, H. N.	Princeton	Bureau
Kerr, Sam'l L.	El Paso	Woodford
Kiernan, James G.	Chicago	Cook
Kingsbury, Geo. C.	Friendsville	Wabash
Kinnear, A. H.	Metamora	Woodford
Kirby, W. H.	Kenney	De Witt
Kirk, Wm. I.	Atlanta	Logan
Koerberlin, Fred.	Freeburg	St. Clair
Kroh, H. T.	Allendale	Wabash
LACKEY, J. S.	Normal	McLean
Lark, Wm. W.	New Hanover	Monroe
LeCaron, H.	Braidwood	Will.
Lemen, E. C.	Upper Alton	Madison
Lindley, A. M.	Urbana	Champaign
Lindley, M.	Urbana	Champaign
Loar, N.	Bloomington	McLean
Loar, James	Bloomington	McLean
Lodge, A. N.	Marion	Williamson
Long, H. H.	Orion	Henry
Lowrie, J. L.	Armington	Tazewell
Lucas, G. W.	Mound Station	Brown
Luse, H. C.	Bloomington	McLean
Lycan, Riley S.	Paris	Edgar
Lyford, W. H.	Port Byron	Rock Island
MAJOR, F. W.	Seneca	LaSalle
Manning, E.	Amboy	Lee
Marsh, B. P.	Bloomington	McLean
Martin, Thos.	Coal Valley	Rock Island
Maxey, W. C.	Hodge Park	Alexander
McCann, J.	El Paso	Woodford
McClung, S. H.	Mt. Sterling	Brown
McCluhan, C. W.	Swan Creek	Warren
McIlwain, Jas.	Okawville	Washington
McIlwaine, Thos. M.	Peoria	Peoria
McIntosh, A. J.	Allendale	Wabash
McMillan, P. H.	Shilow Hill	Randolph
Miller, J. H.	Abingdon	Knox
Miller, Thos. N.	Winnebago	Winnebago
Millon, J. L.	Springfield	Sangamon
Mills, J. L.	McHenry	McHenry
Mills, T. G.	Normal	McLean
Mills, T. S.	Normal	McLean
Montgomery, E. B.	Quincy	Adams
Moore, J. H.	Omaha	Gallatin
Moore, D. O.	Bloomington	McLean
Morse, A. H.	Tampico	Whiteside
Moseley, A. K.	Grand View	Edgar
Moyer, H. W.	Kankakee	Kankakee
Moyer, M. L.	Butler	Montgomery
NASH, Alfred	Joliet	Will.
Near, J. S.	Watseska	Iroquois
Neer, D. S.	Beaucoup	Washington
Nickerson, L. H. A.	Quincy	Adams
Niglas, Jno. N.	Peoria	Peoria
Niemiller, A. H.	Cowling	Wabash

## List of Physicians—Continued.

Name.	Postoffice Address.	County.
OAKS, J. F.	Minooka	Grundy
Oatman, C. R.	Collinsville	Madison
Owens, D. W.	Hersman	Brown
PAAREN, N. P.	Chicago	Cook
Pace, W. C.	Ashley	Washington
Palmer, C. A.	Princeton	Bureau
Parks, C. R.	Bloomington	McLean
Patterson, J. O.	Galva	Henry
Paulding, O. P.	Arrowsmith	McLean
Pierce, W. M.	Addieville	Washington
Piper, C.	Moline	Rock Island
Pitner, T. J.	Jacksonville	Morgan
Pittwood, L. N.	Watseka	Iroquois
Plummer, S. C.	Rock Island	Rock Island
Potts, J. F.	White Hall	Greene
Prentice, F. W.	Urbana	Champaign
Purvines, A. F.	Salisbury	Sangamon
RAFFERTY, T. N.	Palestine	Crawford
Reader, H.	Henry	Marshall
Reat, James L.	Tuscola	Douglas
Richardson, A. N.	Ohio	Bureau
Richmond, A.	Maroa	Macon
Rigg, T. J.	Mt. Carmel	Wabash
Roberts, Heber	Carbondale	Jackson
Robertson, A. S.	Pin Oak	Wayne
Rogers, T. M.	Fairfield	Wayne
Rood, J. B.	Lemont	Cook
Ross, W. R.	Belle River	Jefferson
Runnels, J. F.	Brown's Mills	Cook
SAMMONS, E. H.	Peotone	Will
Schneck, Jacob	Mt. Carmel	Wabash
Scouller, J. D.	Pontiac	Livingston
Simmons, A.	Girard	Macoupin
Skelly, John C.	Lemont	Cook
Skinner, W. O.	Griggsville	Pike
Smith, Courtney	Aurora	Kane
Smith, C. E.	Palmyra	Macoupin
Smith, R. L.	Odin	Marion
Smith, W. T. F.	Bloomington	McLean
Smith, A. D.	Morris	Grundy
Snelling, J. R.	Peoria	Peoria
Spear, L. E.	Shirely	McLean
Spees, F. T.	Tuscola	Douglas
Spees, S. T.	Tuscola	Douglas
Spencer, L. H.	Carbondale	Jackson
Sprague, T.	Sheffield	Bureau
Stahl, E. F.	Mackinaw	Tazewell
Stebaltz, F. W.	Chicago	Cook
Steinrauf, Wm.	Nokomis	Montgomery
Stonemetz, J.	Opdyke	Jefferson
Stoskopf, L.	Freeport	Stephenson
Stout, Jno.	Peoria	Peoria
Strausser, Simon	Chicago	Cook
Suggett, W. L.	Flora	Chy.
Sumrall, Geo.	Jerseyville	Jersey
Sweeney, John	Bloomington	McLean
TAXIS, J. B.	Gardner	Grundy
Tebo, G. H.	Mt. Sterling	Brown
Temple, Thos.	Cameron	Warren
Thompson, Wm.	Oakley	Macon
Toney, E. P.	Trenton	Clinton
True, Charles	Chatsworth	Livingston
Turner, Wm. D.	Carrollton	Greene
Uran, B. F.	Kankakee	Kankakee
Vanderhoff, H. W.	Bloomington	DuPage
Voigt, L. C.	Freeport	Stephenson
Wagner, J. A.	Quincy	Adams
Walker, J. P.	Mason City	Mason
Waller, F. K.	Mt. Sterling	Wabash
Washburn, Thos. D.	Hillshorough	Montgomery
Watson, W. S.	New Holland	Logan

*List of Physicians—Continued.*

Name.	Postoffice Address.	County.
Weede, N. R.	Monmouth.	Warren.
Welsh, Wm. J.	Duncanville.	Crawford.
Westervelt, J. C.	Shelbyville.	Shelby.
Wharff, H. T.	Alhambra.	Madison.
Wheeler, E. H.	Ora.	Jackson.
White, J. L.	Bloomington.	McLean.
Whitcomb, A. L.	Camargo.	Douglas.
Whiting, C. M.	Polo.	Ogle.
Whitley, J. D.	Petersburg.	Menard.
Whitmire, J. S.	Metamora.	Woodford.
Whitmire, J. W.	Metamora.	Woodford.
Wilcox, E. A.	Minonk.	Woodford.
Wilcox, Jno. M.	Clinton.	DeWitt.
Wilcox, L. K.	Warsaw.	Hancock.
Wiley, T. R.	Gibson City.	Ford.
Willard, A. L.	Chicago.	Cook.
Williams, J. S.	Quincy.	Adams.
Williams, W. T.	Pearl.	Pike.
Winchester, Wm.	Elgin.	Kane.
Wing, E. D.	Jacksonville.	Morgan.
Winter, Daniel.	Shelbyville.	Shelby.
Woods, Alex.	Freeburg.	St. Clair.
Woolsey, G. R.	Normal.	McLean.
Worrell, T. F.	Bloomington.	McLean.
Wright, John.	Clinton.	DeWitt.
YOUNGMAN, S. R.	West Liberty.	Jasper.



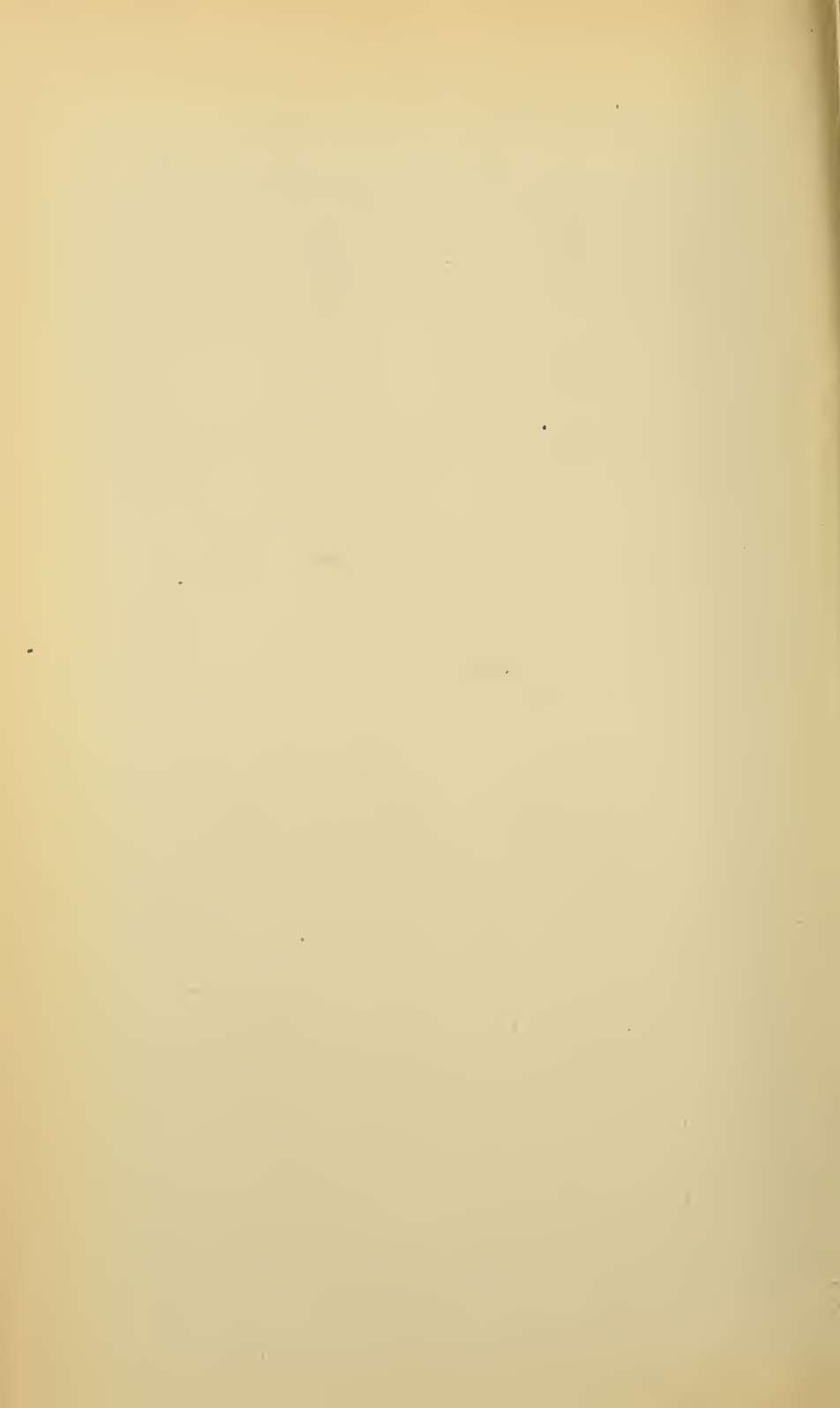
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THE RELATIONS OF SMALL-POX AND VACCINATION.

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## THE RELATIONS OF SMALL-POX AND VACCINATION.

FROM the returns made to the STATE BOARD OF HEALTH by the authorities of 198 localities in 77 different counties of Illinois, the recent Small-Pox Epidemic cost a round total of nearly four and a half million dollars\*—exclusive of all consideration of loss of life, of suffering, and of the maimed and disfigured condition of many of the survivors. This amount is the minimum, based on the actual returns of money outlay and loss; but if estimates be made—as is usually done in computing the cost of an epidemic—upon the value of the time consumed in sickness, the diminished productive power and the expense of supporting the disabled survivors, and including the money value of the lives lost, considered from an economic or material standpoint, the amount would be swollen to a gross total of over fifteen million dollars.

So profound a scholar and accurate a writer as Hirsch has characterized small-pox as a “murderous disease, beside which the loss through the bloodiest of wars, or through other pestilences such as plague and cholera, appears to be infinitesimally small.” It is true that Hirsch, in the passage from which this is quoted, is generalizing upon the history of small-pox both before and after the introduction of vaccination. But to the student, who reflects that within the past third of a century there has been a steadily increasing frequency of epidemic, or rather pandemic outbreaks of small-pox,† the language gives added weight and significance to the

\* See *ante*, pp. 218-20.

† With the introduction of vaccination into the civilized States of Europe, covering a period from 1799-1804, a remarkable decrease in the amount of small-pox, and in the mortality caused by it, quickly became noticeable; and thus it came to be believed that the enemy had been driven forever from the field. The peace had lasted, however, only some ten or fifteen years, when the ravaging disease raised its head anew; and if its prevalence on European and North American soil, as well as in all those regions where vaccination had found general acceptance, was no longer to the extent, and above all of the malignancy of previous centuries, yet there were many epidemics, more or less widely spread, and sometimes covering a great part of the globe, which vividly recalled the tragedies of the past. In the post-vaccination epoch, the disease has been most severe and of a truly pandemic character during the years from 1868 to 1873.—HIRSCH *Hand-book of Geographical and Historical Pathology*, Vol. I., pp. 142-3. In another place, treating of the periodicity of small-pox epidemics, Hirsch adduces a large number of examples of the contrast between pre-vaccinal and post-vaccinal recurrence, from which Breslau in Europe and Philadelphia in this country, may be taken as illustrations of the increasing frequency of epidemic outbreaks during the last third of a century. In Breslau there were such outbreaks in 1804, 1813, 1823, 1831, 1842, 1851, 1856, 1863, 1868, 1871—five in the first fifty years, and the same number in the succeeding twenty years, or average intervals of ten years in the former, and of only four years in the latter period. In Philadelphia in 1808, 1811, 1823, 1827, 1833, 1841, 1845, 1848, 1851, 1855, 1860—eight in the first fifty years and three in the succeeding nine years, or average intervals more than twice as great in the former as in the latter period.

statement of cost of this last epidemic in Illinois. In a table previously given,\* it is shown that small-pox has assumed epidemic proportions in Chicago no less than seven different times since 1850; and with each recurrence in that city there has been an increased invasion of the State at large, keeping pace with the increase of population and the multiplication of means of communication, until, during the last epidemic, over three-fourths of the counties of the State had been more or less infected.

So-called "small-pox epidemics" are the result of two causes: First, the accumulation of a sufficient number of unprotected individuals—i. e., of individuals susceptible to the small-pox contagion; and, second, the access of that contagion to such individuals. In the year 1881, the school-population of Illinois, numbering 713,431 enrolled scholars, contained over 490,000 children, or nearly sixty-nine per cent., who were unprotected or susceptible to small-pox. Of the remaining population, embracing nearly two and a half million souls, over twenty-one per cent., or 530,000, were susceptible to small-pox, as shown by Table VIII, on page 227; making an aggregate of over one million individuals in the State susceptible to the small-pox contagion. Thus the first factor in the production of an epidemic was abundantly present in Illinois prior to the introduction of the second factor, namely, the contagion—which was imported into the State from abroad, without let or hindrance, from the fall of 1879 until the early part of the summer of 1882, when the Immigrant-Inspection Service was begun.

There is no more uniform consensus of opinion on any medical question, "no principle of sanitary science," in the language of a veteran sanitarian,† "more positively established than this, That there is an absolutely certain preventive of small-pox, which is easily obtainable and easily applied." In commenting upon the evidence adduced to prove the absolute certainty of this preventive of small-pox, Aitken says: It is thus clearly demonstrated how Vaccination has thrown the ægis of protection over the world; and how ample, how great, and how efficient that protection may be. It has been shown to diminish mortality generally, and the mortality from small-pox in particular, both in civil and in military life, at home and abroad, and just in proportion as it is *efficiently* performed. It has been shown to diminish the epidemic influence; it has been shown to preserve the good looks of the people; it has been shown that it tends to make small-pox a mild disease compared with the same disease in the unprotected; it confers an almost absolute security against death from small-pox; and, lastly, it has been shown to exercise a protecting influence over the health of the community generally. On the other hand, it is no less amply proven that "wheresoever vaccination falls into neglect, small-pox tends to become again the same frightful pestilence it was in the days of Jenner's discovery; that wheresoever vaccination is universally and properly performed, small-pox tends to be of as little effect as any extinct epidemic of the Middle Ages." (Simon).

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\* See Immigrant-Introduction of Small-Pox—*ante*, p. 332.

† EDWIN M. SNOW, M. D., of Providence, R. I.



The testimony of the recent epidemic in Illinois is fully corroborative of every claim thus made. Small-pox proved to be as destructive as in any epidemic of the pre-vaccination period wherever its contagion was introduced among the unvaccinated—the mortality rising, in this class, to over fifty per cent. On the other hand, just in proportion as vaccination and revaccination had been efficiently performed, that mortality was diminished—falling from a death-rate of over forty-four in every one hundred attacked who had been unsuccessfully vaccinated, to absolutely no deaths among the few who, having been previously efficiently vaccinated, were still attacked with the disease, but were again successfully vaccinated after exposure. The duration of the disease, its severity, and its results were all found to bear a direct relation to the vaccinal history of the patient; where this was *nil*, there was the longest duration (except where terminated by death) the greatest severity, and the most disastrous sequelæ; where the vaccinal history was good, the disease was mild, often of only a few days' duration, and never followed by disfigurement, loss of sight or hearing, or by other disability. And, lastly, it was found that, after the contagion had obtained a foothold in a community where vaccination had been neglected, no enforcement of sanitary measures, nor isolation of cases, then availed to restrict the epidemic influence or tendency until vaccination and revaccination had been made general.

The preceding pages contain in fullest detail, and from a variety of sources, the abundant proof of these assertions. In the Tables, Notes and Comments, in the Details of Local Outbreaks, in the Tabular Statement of 1200 Cases, with its rich and copious Notes, in the Statistical Results of the School Vaccination Order, and in the Vaccination Records and Experience of Physicians, there is a mass of facts presented which amounts to a demonstration of the value of vaccination, and of its entire adequacy, when universally and properly performed, to positively make small-pox of as little effect, among the evils besetting the life and health of the citizen of the State, as any extinct epidemic of the middle ages. A brief consideration of the causes which have led to the apparent comparative failure of this absolutely certain preventive of small-pox, and some indications for the removal or correction of these causes, seem to be a fitting conclusion to this report on the Small-Pox Epidemic of 1880-82.

#### THE NEGLECT OF VACCINATION AND ITS REMEDY.

Even in those countries of the Old World where vaccination is more or less rigidly enforced by law, a very considerable proportion of the population, varying from three to more than fifteen per cent., is found to be unvaccinated. In this country, except in Massachusetts, there has never been any successful attempt to legally enforce the operation by State law, although such laws have been enacted from time to time. In Illinois, the subject had heretofore been relegated to the municipal authorities; and, except in Chicago, and a few other of the larger cities and towns, no effort had ever been made to secure the general vaccination, even of school-children—the result being that, as elsewhere shown in these pages, fully one-third of the population of the State was unprotected and susceptible to small-pox at the beginning of the recent epidemic.

When, at its special meeting in November, 1881, the STATE BOARD OF HEALTH decided to secure the vaccinal protection of school-children, it was confronted with certain considerations which, for a time, caused some hesitation. To what extent was it justifiable to compel vaccination when the supply and quality of vaccine material could not be controlled? When even many physicians, to say nothing of the laity, looked upon the operation as a mere scratching of the skin? When the majority of medical colleges regarded it as too insignificant to devote a single lecture to, and conferred degrees upon men who had never seen a vaccine vesicle?

An eminent sanitary authority, Dr. Elisha Harris, of New York, has laid down the following, as essential conditions which the State should secure before attempting to enforce compulsory vaccination:

I. That the quality of the vaccine lymph shall be absolutely perfect, and that the insuring of this uniform excellence shall not be permitted to be subject to uncertainty or any kind of capricious judgment [or commercial exigencies.]

II. That no barriers of poverty, ignorance, or the inaccessibility of means, shall prevent the administration of the vaccination which each child needs.

III. That every parent and custodian of children, and every other person susceptible to small-pox, and every medical practitioner, shall, by timely and adequate provision of the State and local sanitary authorities, be wholly without excuse for failing to have conveniently accessible the needed supply of perfect vaccine virus, and whatever is needed in the nature of information, instruction and a personal record.

IV. That whatever is ordered or required by the public authorities to be performed in respect of vaccination, the laws should enable and require the same authorities to insure being performed, and should give to the people, as well as to the authorities, such necessary means of information and instruction as shall suitably prepare them to understand and perform their duties.

The wisdom and the justice of these propositions are fully admitted; but, on the other hand, there was an imminent public calamity which it was believed possible to avert, in large measure, by promptly securing thorough vaccination and revaccination to as great a degree as possible. In this dilemma, the BOARD adopted that middle course in which the Latin poet says lies safety; and, while not making the vaccination of school-children absolutely compulsory, ordered that no scholar should be admitted to school "without presenting satisfactory evidence of proper and successful vaccination." By enforcing this rule the safety and welfare of the schools, as a whole, as well as the personal rights of those scholars who, notwithstanding their vaccination, still remained susceptible to small-pox, would be secured, without interfering with the individual rights of those opposed to vaccination, except to the extent of abridging their school facilities. It was a question of the greatest good to the greatest number, with the least evil to any; and upon this basis the question was disposed of, for the time being. Supplementing this school order, effort was made in various other directions to

secure the vaccination and revaccination of as many others as could be reached, by circulars, letters and other means, which were mandatory, instructional, or advisory, as the case seemed to require.

The situation was gravely complicated by the difficulty of procuring pure vaccine material—sometimes of procuring any; by the results of the operation improperly performed; and, in not a few instances, by the pecuniary question. Compulsory vaccination by State law was demonstrated to be impracticable under existing conditions; and the conclusions finally arrived at may be thus formulated on the lines already laid down by Dr. Harris:

*First*—The practice of vaccination has fallen into neglect through the failure of medical colleges to impart, and of the medical profession to acquire, a thorough knowledge of the essentials of vaccination; through a frequent belittling of the operation, a slurring of details, and a reprehensible carelessness on the part of those who possess the necessary knowledge; through the use of imperfect or improper vaccine material; and through the want of such secular knowledge, concerning its value and importance, as it is clearly the duty of the family physician and of sanitary authorities to disseminate.

*Second*—The most scrupulous care in the selection of vaccine material; the greatest skill in vaccination; the faithful observation and record of result; the exercise of good judgment concerning the quality and perfectness of the operation and its results; the faithful testing (by Bryce's method, or a revaccination,) in every case in which the sufficiency of the primary vaccinal operation may be reasonably doubted; the revaccination of every child after the period of puberty; the exercise of tact and patience in the persuasion of the ignorant and prejudiced; and, finally, the systematic registration of vaccinated infants and all older children in our country, are essential requisites in the system for securing a trustworthy and universal protection against small-pox.

*Third*—That, inasmuch as even these protective measures cannot be secured in any city or State without the accessory facilities which only a State system of registration of births can afford, all experience shows that a judicious system of medical and official notification and instruction to parents, when supervised by competent minds, becomes one of the most effective agencies in securing the timely and cheerful compliance with the duty of vaccinating every infant. The Scottish, English, French and German laws and official methods for securing vaccination of infants are complete examples as respects the system of procedure in providing for public vaccination; but the faultiness in the qualities of the vaccinal virus employed, the frequent carelessness of vaccinators, and the want of adequate instruction to parents and care-takers of children are great drawbacks upon the success and popularity or acceptableness of obligatory vaccination. These circumstances need not be drawbacks in this country, if we infuse and vitalize the vaccinal system which shall be adopted with the instruction, and the inquisitive criticism which Americans are wont to give to matters of public sanitary duty.



*Fourth*—The encouragement of official supervision of the supply of vaccine material, which shall be kept continually under a system of registered observation and testing for the maintenance of the perfection of its attributes, is plainly a duty of the first importance; and wherever a State Board of Health is formed, or a municipal sanitary board is endowed with sufficient authority and means, it should maintain, or at least supervise, such a system of vaccinal supply. It is by no means necessary to wait for the organization and development of a complete sanitary system, nor for the perfecting of birth registry, before providing a perfect standard and a public supply of vaccinal lymph.

*Fifth*—No code of obligatory laws or regulations for general vaccination should be framed which does not provide for adequate instruction and the best safeguards to secure perfect vaccination. The laws for the purpose, the rules and methods of administration under the laws, even when compulsory, can and should be so ordered as to avoid the needless incitement of ignorant prejudice and wanton opposition.

*Sixth*—State boards of health and the sanitary authorities in each city and town of the respective States may greatly expedite the securing of general vaccination, by uniting in efforts to secure ample diffusion of correct knowledge concerning the merits and duty of vaccination among all classes of people, and providing methods for supplying perfect vaccine virus and an effective system of practical instruction in vaccinating.

*Seventh*—In large cities and populous districts regular vaccinating days, at intervals of one week, are established by all experienced public vaccinators and by the best family physicians, for the duty of inspecting every vesicle and vaccine at the expiration of about seven days; the importance of facilities on particular days for fresh lymph and arm-to-arm vaccination with it, as well as the practical relation of habit and regularity in any duty or service which is liable to procrastination or neglect, require that in every city and large town the public health authorities, or the medical profession, shall see to it, that on a designated day and hour and in suitable places, the public vaccination shall be offered. In like manner, medical practitioners—especially when serving the poor—may greatly facilitate and insure the best results of the duty they owe to families, by designating one day in the week for replenishing their own stock of vaccinal virus, inspecting every vaccinated person of the previous week, and vaccinating others then requiring it. Vaccinating days and the seventh or eighth day inspection must be regarded as essential to the success as well as to the general popularity and universal application of vaccination. In sparsely-settled communities and in country practice, the difficulties in the way of arm-to-arm vaccination will often be found insuperable; and recourse must be had, in such cases, to the stored lymph, the crust, or the bovine point. This, however, should not be held to absolve the physician from the imperative duty of examining the vesicle, and the resulting cicatrix, at the proper times, and of certifying to the character of the vaccinal protection secured.



*Eighth.*—Vaccination is so truly within the domain of medical science and practice, that no official and public system, however compulsory it may be, can wholly supersede the duty of family physicians in the vaccination of families of the more intelligent classes; and for this reason, and for awakening the scrupulous concern of physicians for the maintenance of perfect means and efficacy in private, as well as public, vaccination, the official method relating to the subject needs to be adopted to secure mutual efforts on the part of the family practitioners and the sanitary authorities, and so to render the protection against small-pox universal and perfect.

*Ninth.*—Experience in various countries, as well as in our own State, now proves that a State or a nation may justifiably require that in all departments of public employment in which there is such liability to the contagion and dissemination of small-pox as would embarrass the public service or injure the people, it should be an established rule of all official and subordinate service in that department, that each individual shall present certified testimony of vaccination, or other protection against small-pox.

*Tenth.*—In all schools, colleges, universities, penal and reformatory institutions, asylums, and factories, there should be an established rule, requiring that every individual therein shall present certified evidence of vaccination, or other protection against small-pox.

*Eleventh.*—Experience in the best governed States and cities altogether confirms the correctness of the principle and practicability of the laws which require that such rules as are specified under the last two preceding conclusions should be supervised by sanitary authority.

*Twelfth.*—Obligatory vaccination is not in danger of becoming odious to the people, if the law, and the practice under it, provide for perfect accuracy in the operation itself; for the maintenance and care of a perfect standard vaccinal supply; for the critical observation of results in its application; and for maintaining a system which, as Mr. Simon truly says, "from beginning to end, and from center to circumference, requires, in all its parts, to be vitalized by the science of medicine." In maintaining such a system of obligatory vaccination, the conclusion of John Stuart Mill, in regard to "the limits of the province of government," aptly applies: that when a government provides means for fulfilling a certain end, leaving individuals free to avail themselves of different means, there is no infringement of liberty, no irksome or degrading restraint. One of the principal objections to government restraint is then absent." The means, the motives, and all needed instructions can so prepare the way for the duty of vaccination that universal obedience to the public laws concerning it will be promptly rendered.

Until, however, these means are provided; until medical instructors include the practice of vaccination among the subjects of importance in the lecture-room and dispensary; until physicians and the public are impressed with the value and the dignity of the operation; the enforcement of compulsory vaccination must, necessarily, be more or less unsatisfactory and defective. But with these

aids and influences—and nowhere may they be more readily commanded than in this country—there is no valid reason why vaccination should not be made as obligatory as the discharge of any other duty essential to the protection of health and life.

### THE OPERATION OF VACCINATION.

“What is called vaccination is, in a vast number of persons in the United States and the rest of the world, only so in name and not in reality,” says Elisha Harris. “All persons—amateurs, druggists, old women, midwives, etc.—are allowed to vaccinate in any way they think proper, and the persons operated on are considered vaccinated,” says Mr. Marson, speaking of vaccination in England. “Medical men are found to vary exceedingly in their estimate of a satisfactory vaccine vesicle and cicatrix, or the reverse, for their standard is comparative rather than absolute.” (Seaton, Sanderson, Buchanan.) “This is exactly what might have been expected,” says Aitkin, “seeing that medical students are left to pick up their knowledge of vaccination where they can. In fact, practical medical education at our schools of medicine has hitherto, or until very recently, been entirely *nil* in regard to this most important subject, and no test of knowledge has ever been applied.” Dr. Henry A. Martin, who has devoted a life-time to the subject, says: “My belief has very long been that in no country has vaccination been carried on less satisfactorily than in the United States. Not so far as the percentage vaccinated, for, in the older States, that is undoubtedly large, but in the character of the vaccination done.

\* \* \* When we reflect that even in our most pretentious medical colleges vaccination was not, till lately, thought worth teaching, and the protection of the people had to be done by men who had never even learned what a perfect vaccine vesicle was, it is hardly to be wondered at that vaccination in America has been done very badly.” And one of the latest writers\* on the subject says: “I doubt if there is a civilized land where less is known of the theory and practice of vaccination than in America.” In a footnote he adds: “The subject is criminally neglected in our medical schools,” and, being himself a professor in a leading medical college, it must be admitted that he speaks *ex cathedra*.

During the late epidemic it was notorious that many otherwise competent and successful physicians were practically ignorant of many of the most important details of the vaccinal process. Much of the alleged worthlessness of virus was due to this ignorance; and many cases of complications would doubtless have been successfully avoided had the operator possessed the necessary knowledge and practical experience.

Aside from the general questions of the condition of the individual, age, freedom from cutaneous affections, dentition, etc., etc., the choice of virus and the different manipulations required for different kinds, the after-care necessary to secure the best results, and kindred considerations—there were numberless instances of physicians

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\* W. A. HARDAWAY, M.D., in *The Essentials of Vaccination*, 1882.

vaccinating individuals and furnishing them certificates of vaccinal protection on one and the same day. In many places these certificates simply read: "*I hereby certify that I have this day vaccinated A. B.:*" and these, duly signed by an M. D., were accepted as evidence of protection against small-pox, by school-boards, employers and others, until the wide-spread distribution of the certificates prepared by the Board called attention to their *prima facie* worthlessness. Fully one-third of the returns of vaccinations by physicians were discarded on account of inherent evidence of the ignorance of the essentials of vaccination by those who made them—such evidence consisting very largely in the dates of examination, as heretofore mentioned.

The evil wrought by this ignorance and incompetence is diverse in its nature. One result is to frequently beget a false sense of security in those so unfortunate as to be cut for the cow-pox by one of this class. Another is to degrade the operation of vaccination in the eyes of the laity. If the physician, himself, will vaccinate any individual presented—without proper examination as to fitness or physical condition; merely abrading, or scarifying, or puncturing the skin, rubbing in the virus, and then turning the patient away, with no after-care or examination—it is not to be wondered at that parents, druggists, barbers, midwives, nurses and old women of both sexes should consider themselves competent to perform the operation. A vaccine point may be bought for a few cents, and, to a parent with a large family, the example set by a careless vaccinating physician furnishes a strong temptation to do his own so-called vaccinating, and so save the professional fee.

A still more deplorable result, and one caused by both the foregoing, is the loss of faith in the protective power of vaccination. When it is seen that epidemic outbreaks of small-pox are increasing in frequency throughout the world, notwithstanding vaccination has been known for more than eighty years; that there is an increasing proportion of cases among those claimed to have been vaccinated; and that the mortality among this latter class—the so-called vaccinally protected—is also increasing, it must be admitted that there is some seeming reason for doubt, some ground for inquiring whether the great discovery of Jenner is losing its potency.\* In the late epidemic in Illinois over fifty-five per cent. of all cases are reported to have been vaccinated; and of those vaccinated "before exposure only," nearly seven per cent. died.<sup>†</sup> That the protective power of vaccination, *properly performed*, has in nowise diminished, during the last eighty years, is demonstrated elsewhere; and it is now proposed to consider what constitutes the proper performance of the operation, having regard (1) to the condition of the individual; (2) to the time and season; (3) to the *modus operandi* of vaccination; (4) to the after-care of the individual; (5) to the inspection and characterization of the results; (6) to the necessity for revaccination; and, finally, to the question of the choice of virus.

\* During the three decades from 1851 to 1880, inclusive, the deaths from small-pox in the city of London rose from 276 in the million of population to 439. The successive increase is thus shown: 1851-60, 276 deaths per million; 1861-70, 302 deaths per million, or over nine per cent. increase; 1871-80, 439 deaths per million, or over 45 per cent. increase over the previous decade, and *nearly sixty per cent. increase* over the ten years ended 1860.

<sup>†</sup> In small-pox hospitals the proportion of vaccinated among the total cases has been reported as high as eighty-seven per cent., and the death-rate among this class at nearly twelve per cent.



### *The Condition of the Individual:*

Vaccination being the artificial production of a constitutional disease, it is, manifestly, of the greatest importance that the individual whom it is proposed to subject to its influence should be in as good health as is fairly attainable. Therefore, weak, feeble or sickly infants, those presenting evidence of some disorder of nutrition, or of functional disturbance, as from dentition, indigestion, etc.; or suffering from diarrhea or other bowel affections; or presenting chafed or abraded cutaneous surfaces on any portion of the body, or any form of cutaneous eruption; or during the period of weaning—should not be vaccinated—except under the circumstances detailed in the next section. At any age, the presence of acute febrile diseases, or of intestinal or cutaneous (especially vesicular) affections, tends to modify and complicate the vaccinal action, and should lead to a postponement of the operation, with the exceptions already indicated.

It is, then, the duty of the operator to personally examine the entire body of an infant before proceeding to vaccinate, and to otherwise satisfy himself of its freedom from any of these inhibitory conditions. It will not always do to rely upon the statement of the mother or nurse, who would be apt to regard the existence of a slight diarrhea, or the presence of a local intertrigo—a chafe or abrasion between the thighs, or nates, or in the folds of the skin of the groin, or elsewhere—as a matter of too little importance to mention.

On the other hand, there are many chronic diseases of a grave character, syphilis, for example, which do not interfere with vaccination, nor contra-indicate the operation. This is especially true of scrofula and consumption, diseases which have been favorably affected, to a very marked degree, by the introduction of vaccination. Scrofulous subjects, however, or those exhibiting a predisposition to that cachexia, should not be vaccinated—except in cases of emergency—during the first year or two of life. Sound judgment dictates that they be protected, during this early period of development, from any serious constitutional disturbance,—and the same may be said of those exhibiting a marked hereditary phthisical or tuberculous predisposition.

Under ordinary circumstances, neither the menstrual period, gestation, nor lactation, offer any obstacle to vaccination; but, occasionally, cases will present themselves in which some disturbance or complication of these functions may dictate its temporary postponement.

The existence of erysipelas or diphtheria on the premises, or in the immediate vicinity, renders greater care necessary, if, indeed, it should not positively forbid the operation. Recent exposure to the infection of scarlet fever or erysipelas, also makes it advisable to postpone until after the period of incubation.

### *The Time and Season:*

During the existence of a small-pox outbreak in any locality, or upon known exposure to a case of small-pox, prompt vaccination of every susceptible subject is imperative, regardless, as a rule, of every



other consideration. Even newly-born infants, as well as those cases, above noted, in which the operation may be otherwise contra-indicated, should then be vaccinated, as the choice of the lesser of two evils.

The operation, however, should not be postponed until such emergencies arise, if from no other reason than that, in the presence of the small-pox contagion, the action of the vaccinal process is apt to be much more severe than at other times, and to be attended with more and graver complications. No other disease generates its contagion so profusely as small-pox. A single case is sufficient to infect the atmosphere for some distance in every direction; and the multiplication of cases in a community may very probably engender such a condition as to sufficiently account for the *constitutio epidemica variolosa*, by which some writers have sought to explain the unusual susceptibility to both the variolous and the vaccinal virus, which characterizes the periods of so-called epidemics of small-pox. During the late epidemic this increased susceptibility was very strongly marked; many instances coming under observation where individuals, unsuccessfully vaccinated in the earlier stages of the small-pox prevalence, finally yielded to the influence of the virus, when, so far as could be determined, the conditions were similar except that the constitution of the individual had become affected, and the necessary degree of susceptibility was thus renewed or produced.

Aside from this consideration, there is the difficulty of procuring vaccine in times of panic and excitement which attend small-pox outbreaks.

Every healthy infant should be vaccinated between the ages of six weeks and three months, approximately. Except in large cities, where there is always more or less danger of small-pox, the latter age is preferable on many accounts, or even later, provided it antedates the beginning of teething. If, from any reason, as the impossibility of securing vaccine material in a country district, the operation is unavoidably postponed until dentition begins, it should then be further delayed until after the irritation and disturbance, usually produced by the eruption of the first teeth, has subsided.

Rigorous and inclement seasons of the year are unfavorable for vaccinating; and, whenever not otherwise positively indicated, the operation had better be performed in the mild, equable weather of spring or fall, avoiding alike the excessive cold of winter, and heat of the summer months.

#### *The Modus Operandi of Vaccination:*

The Jennerian mode of vaccination, *i. e.*, from arm to arm by the use of eighth-day lymph, does not obtain in this region to any extent; and, except in cities and large towns, its requirements cannot be commanded by the general practitioner. So that this method may be very briefly dismissed with one or two practical hints. It is important that the subject furnishing the lymph should be in good health itself, and of known healthy parentage; that the lymph should be drawn only from a perfect primary vesicle, and always

before there is any appearance of areola—say on the seventh or eighth day after the operation; and that care be taken to draw only lymph from such vesicle, and not blood or serum.

Prior to the year 1871, the almost universal method of vaccinating in the United States was by the use of humanized virus, occasionally by the arm-to-arm process, but generally in the form of lymph stored in capillary tubes, or upon points, or in the vaccine crust; and this virus is still preferred by many of the most successful and experienced vaccinators. If the crust be used, a sufficient quantity is reduced to powder and made into a thin paste with perfectly clean water; this paste is then applied to the abraded surface, or inserted, by puncture or through scarification, into the true skin.

Since the introduction of bovine virus the vaccine point, or quill, has largely supplanted the use of the crust, or humanized virus. The relative merits of the two kinds are discussed elsewhere. The only practical point to be noted in this connection is the greater insolubility of bovine albumen, and the consequent necessity for more care in effecting its perfect solution, and for more time in thoroughly applying it to the abraded or scarified surface. To a neglect of these details is no doubt due many cases of failure with bovine virus.

In operating, the left arm of the subject should rest in the hand of the operator, with the skin, over the insertion of the deltoid muscle along its posterior border, drawn tense between the thumb and fingers. The necessary incision, puncture, scarification, or abrasion, is then made with a scrupulously clean instrument—lancet, needle, or the square end of the ivory point. No blood should be drawn, but only so much of the tissue removed, or penetrated, as is required to secure the direct application of the vaccine to the *cutis vera*. This, the true skin, should not be wounded, but only exposed; cellular and glandular inflammations, multiple abscesses, and other untoward results, are most frequently caused by the wholly unnecessary wounding of the true skin.

If humanized vaccine be used, either in the form of lymph or crust-plate, its application is simple and prompt; but if bovine be employed, its greater insolubility requires that care should be taken to effect its thorough contact with the cutis by prolonged rubbing. The dress should not be adjusted until the surface of the abrasion is entirely dry; and the abraded surface may be protected by a bit of isinglass plaster.

As to the number of insertions which should be made there is some diversity of opinion. The English and Continental practice, or wherever arm-to-arm vaccination is the rule, is to vaccinate in several places—four or five, or even more—and often on each arm. It is probable that the custom arose out of the desirability of securing as many vesicles, which could be tapped, as possible, and that the question, originally, had an economic, rather than a protective importance. Jenner's early rule was to make only one insertion; but as he laid much stress upon the necessity of preserving the vesicle intact throughout all its stages, it became necessary to multiply the number of vesicles in order to procure a supply for the arm-to-arm process. Subsequently, the oft-quoted table of Marson,

supplemented by that of the London Small-Pox Hospitals and one by John Simon, seemed to establish a connection between the number of vesicles and the protection conferred. On the whole, however, there is reason for believing that the quality of the vaccination is of much more importance than its quantity, as measured by the number of vaccinal scars. It is at least certain that the first vaccinations performed by Jenner and his immediate disciples, proved amply protective, although they consisted of single insertions "by means of a very slight scratch, not exceeding the eighth part of an inch, or a very small oblique puncture." Jenner, indeed, distinctly says that "a single pustule is sufficient to secure the constitution from the small-pox, but as we are not always certain the puncture may take effect, it will be prudent to inoculate in both arms, or to make two punctures in the same arm, about an inch and a half asunder, except in very early infancy, when there is a great susceptibility of local irritation.\*"

There is no obvious physiological or pathological reason for the claimed increase of protective power through an increase in the number of vesicles. The figures compiled by Marson, MacCombie and Simon, which are relied on to prove such relation, are more philosophically explained by assuming, as is self-evident, that the chance of obtaining at least one perfect—and, therefore, fully protective—vesicle is increased by the multiplication of the number of vesicles. But this is to confess to carelessness or imperfection on the part of the vaccinator, which needs to be corrected by using a blunderbuss instead of a rifle. In the thirty-odd years' experience of the writer, with exceptional facilities for observation, it has been found that post-vaccinal small-pox is fully as frequent, in proportion, among those vaccinated in countries where the rule of multiple insertions obtains, as among those presenting single well-marked cicatrices; and that neither the one nor the other is to be relied upon to the neglect of revaccination. Since bovine virus has become so fashionable, the question has assumed greater practical importance in view of the more severe local effects—the more serious traumatism attendant upon its use. As a rule, and especially with delicate and tender-skinned infants, one insertion of bovine virus is all that is here advised, so as not to occasion unnecessary suffering, torment and danger. With humanized vaccine this consideration has less weight, and there is no objection to multiplying the insertion if it be desired to secure crusts, or for any other reason.

#### *The Phenomena of Vaccination:*

In normal, uncomplicated vaccinia, following the introduction of good humanized lymph or crust, there is a uniform succession of symptoms which proceed with almost unvarying regularity in healthy subjects. At the seat of the operation, on the second or third day after, rarely so late as the fourth, a slight papular elevation of the skin may be detected, which becomes distinctly marked within the next twenty-four hours. This papulation is often attended with some feverishness, slight rise of temperature and general constitutional disturbance, although not usually to any considerable degree, and generally subsides at the beginning of vesiculation, which takes place during the fifth to eighth day. The vesicle now formed is of a slightly bluish tint or pearl color, with a raised periphery, and



characteristic central umbilication. On the eighth day after the operation this vesicle has attained its maximum of perfection; it is plump, round and distended with clear, colorless lymph, which increases its pearl color and deepens the umbilication. A zone of bright rose-colored inflammation forms around its base, and within this areola the vesicle lies, like "a pearl upon a rose-leaf," to quote Jenner's simile. For the next forty-eight hours, during which there is frequently a renewal or increase of the feverishness and malaise, the vesicle and areola both increase in size; the former begins to lose its pearly translucency, through the lymph becoming opaque, and gradually assumes a pustular character; and the latter spreads to an area of from one inch to three inches in diameter, becomes deep red in color, is hot and sensitive to the touch, and is often attended with considerable swelling and induration of the subjacent connective tissue, and sometimes a painful enlargement of the lymphatic glands. As the areola fades away, after two or three days' duration, there is a subsidence of these symptoms; the vesicle, now become a pustule, begins to dry up and is gradually converted into a hard, glossy, dark-brown scab or crust, which becomes detached and falls off about the twenty-first day—sometimes as early as the seventeenth, or as late as the twenty-fifth day after the operation, or even later. The site of the vesicle is marked by a cicatrix, which eventually becomes dead white in color, owing to the destruction of the *rete mucosum*; and which is circular in outline, depressed, and foveated or pitted. If two or more insertions of the vaccine have been made close together, or if the application has been made on a large abraded or scarified surface, two or more vesicles may be formed, which will either develop into one compound vesicle of an oval or irregular outline, but with only one point of umbilication; or, preserving their individuality while confluent or coalescent, will each present its own umbilicated centre. In these cases the resulting cicatrix will present an irregular outline, conforming to the outline of the compound vesicle, or of the group of independent vesicles, as the case may be.

There are many deviations from the duration and degree of the various stages here described, but mainly in point of duration, and much more frequently with bovine than with humanized vaccine. For example, the development of the vesicle may be retarded, sometimes for several days; or it may be accelerated, but never to the same extent. The sequence of the stages, however, is adhered to with unfailing regularity in normal, protective vaccinia. Occasionally, volunteer vesicles will appear at other points than the seat of the operation; but these seldom, if ever, present the characteristic umbilicated centres. Other minor eruptions, roseola and lichen being the most common, sometimes occur during the height of the areolar stage, but rarely are of sufficient intensity, in healthy subjects, to require much attention. Inflammation of the areola may also run high and produce severe local symptoms; but these are usually promptly allayed by cold compresses, or mildly astringent lotions.

Spurious vaccination presents too many phases and varieties to warrant its detailed description in this place and connection. In general, it may be said that any vaccination is to be regarded as



spurious, i. e., non-protective, in which the character of the vesicle, and the course of its development, materially depart from the description above given; or which does not result in a clearly-marked, characteristic cicatrix, measuring at least one-fourth of an inch transversely. In all such cases the operation should be repeated at the earliest favorable opportunity; and the individual is not to be regarded as vaccinally protected until the typical vesicle and cicatrix have been obtained.

*After Care of the Vaccine; Inspection and Characterization of Results.*

From the moment of the insertion of the vaccine until the vesicle has fairly dried and the scab formed, proper attention should be given to protect against any influence which may modify or interfere with the normal progress of the vaccinal process. Mechanical irritation, rubbing, scratching, friction of clothing, want of cleanliness, faulty hygienic conditions, and a variety of other causes, are sufficient to impair or to destroy the effect of the operation; whilst some of them may set up such a degree of inflammation as to endanger, if not destroy, life itself. Care should, therefore, be taken to keep the patient from rubbing or scratching; to relieve the inflamed surface from the pressure or friction of clothing; to avoid injury by rough handling, blows or falls; and to mitigate annoying conditions, such as excessive itching, heat, tenderness, etc., by appropriate treatment. True erysipelas as a direct result of vaccination is a rare complication; but excessive erythema, often mistakenly called erysipelas, is not uncommon. These erythematous eruptions require, usually, only simple topical applications; as do, also, the more frequent roseolous, eczematous, lichenous and other minor exanthems. Glandular swellings and indurations of the cellular tissue do not usually call for any special attention: but occasionally these stages pass into inflammatory conditions—usually as the result of unnecessary injury of the *cutis vera*, as heretofore noted—and may then form troublesome complications. Ulceration and destruction of the vesicle is almost always due to mechanical violence.

Of the many morbid irregularities which may attend vaccination improperly performed, or with impure virus, or upon subjects suffering from other diseases—it is not here proposed to treat. Their discussion would involve more of time and space than can be profitably allowed in these pages. If the precautions already stated be intelligently observed, the average practitioner will rarely, if ever, be called upon to contend with anything more serious than the difficulties and complications above detailed. The development of the vesicle during the period of the formation of the areola, should be carefully watched, and the premature removal of the scab or crust be forbidden, so as to avoid unnecessary exposure of the tender cicatrix and danger of setting up inflammation and ulceration. After the scab has fallen off the resulting cicatrix should be examined; and upon its appearance, coupled with the facts of the progress of the vaccination, should be based the characterization of the degree of vaccinal protection secured. In the "Instructions" for filling out the School-Vaccination Certificate, the use of the following terms was recommended: *Typical*, if the resulting scar is well-marked, characteristic,

of normal size, and perfect in outline, depression and pitting; or *Modified*, if, while well-marked and characteristic, the scar is less than normal size and of irregular contour; or *Bad*, if the scar be less than one-fourth of an inch in diameter, or simply a smooth, flat, shiny mark. These three classes will serve to indicate, in a practical manner, the character or degree of the vaccinal protection. Only a typical scar, as here defined, should be accepted as evidence of a fully satisfactory vaccination; if modified, the extent of the modification, and the history of the vaccinal process, must be duly considered in determining whether a repetition of the operation is demanded at once; but if simply "a smooth, flat, shiny mark," or less than one-fourth of an inch in diameter, the prudent physician will refuse to assume the responsibility of certifying to the vaccinal safety of the individual, and will insist upon the test afforded by a revaccination. Contrary to a very fashionable opinion, to quote Dr. Martin, a perfect typical vaccination of a duration and intensity at all approaching a proper standard, and which has not been interfered with in a very unusual manner, results in the production of a scar as distinct and defined as if stamped by a sharply-cut die; and the scars of a hundred such vaccinations are almost as like each other as the impressions on a hundred coins fresh from the mint. If the arm of a person vaccinated, no matter how long before, does not present a scar of this description, the evidence is sufficient that that person was never properly vaccinated; that the so-called vaccination was done with lymph more or less deteriorated, or the person was in a condition which prevented a full and perfect evolution of the protective disease, or the vesicle was broken or otherwise injured so as to interfere with the proper development of the eruption.

### *The Necessity for Revaccination:*

Aside from the improper or imperfect performance of the operation, a failure to recognize the limitations of the protective power of vaccination—a fact demonstrated in its early history—is one of the most important causes which have led to hostility or apathy regarding the operation. Concerning these limitations it needs to be understood, or at least remembered, that while perfect vaccination, as a rule, secures immunity against small-pox to at least as great an extent as does one attack of small-pox against a subsequent one, yet the rule is not without exceptions, any more than is the protection secured by small-pox itself. Post-vaccinal small-pox is as possible as recurrent natural small-pox; but there is this to be said of the former, That post-vaccinal small-pox, or varioloid, is a mild disease as compared with recurrent natural small-pox—the mortality in the latter class, during the late epidemic, rising to twenty-nine and a-half per cent., as against only six per cent. in the former. See Tables I and V, pages 221 and 225.

It needs to be understood, further, that perfect vaccination implies and involves *Re-vaccination*; that a single vaccination, no matter how successful it may be, must be regarded as protective only for a varying limited period—the duration probably depending on the intensity of the pathological process and individual susceptibility; and that the operation requires to be repeated, at least after puberty, as well

as after any great constitutional change or disturbance of the system.\* The duration of the period of protection by perfect vaccination is now fixed at about twelve years, this being the result of a series of experiments and observations by Voigt, of Hamburg, who finds that after the lapse of twelve years, persons who have been attacked with small-pox show the same susceptibility to vaccination as those who have been vaccinated at an equally remote period; consequently, children of 12-13 years of age, vaccinated in infancy, present a moderately favorable soil for the poison of smallpox; and, therefore, "the revaccination of all children at, or even after the age of twelve, is highly to be recommended." On the same basis of reasoning the repetition of the operation at every recurring period of twelve years is also to be recommended.

Voigt's conclusions are supported by the observations of the writer, and by the statistics of small-pox in London and in England and Wales, where it is found that, for the past thirty years, during which the vaccination of infants has been made more and more general, the death-rate from small-pox among children under five years of age has steadily declined, and there has been some diminution of the mortality even up to 10 years of age. Thus, during the decade ended in 1880, such deaths among children under 5 years was only 25 per cent. of all deaths from small-pox in England and Wales, and 29.2 per cent. in London; while in the decade ended in 1870, these percentages were 47 and 49.9 respectively; and in the next preceding decade, 1851-60, they were 56.3 and 55.5, respectively. On the other hand, it is seen by the same tables, that there is an increase in the death-rates from small-pox at all other ages over 10 years, that is, as the ages recede from the period of early vaccination.

Tabularly stated for these three periods, the number of deaths from small-pox at given ages, to each million of population at the same ages, and the respective percentages, are as follows:

#### IN LONDON.

AGES.	Deaths from small-pox per each million of population living, at specified ages.			Proportion, per cent., to total number of deaths at all ages.		
	1851-60.	1861-70.	1871-80.	1851-60.	1861-70.	1871-80.
Under 5 years.....	1,296	1,158	1,133	55.52	49.91	29.23
From 5 to 10.....	358	290	579	15.33	12.50	14.94
From 10 to 15.....	99	91	266	4.24	3.92	6.86
From 15 to 20.....	135	143	346	5.78	6.16	8.92
From 20 to 25.....	191	217	469	8.18	9.35	12.10
From 25 to 35.....	121	158	387	5.18	6.81	9.98
From 35 to 45.....	57	119	282	2.41	5.12	7.27
From 45 to 55.....	44	63	182	1.88	2.71	4.69
From 55 to 65.....	13	39	110	.55	1.72	2.83
From 65 to 75.....	12	36	63	.51	1.54	1.62
Over 75 years.....	8	6	58	.34	.25	1.49

\*It is even asserted that the removal of the vaccinal cicatrix, as by amputation of the arm, destroys the vaccinal protection. Thus Dr. JOHN S. BILLINGS, U. S. A., in an article on the London International Medical Congress of 1881, says: "It is possible that the immediate location of the body in which a vaccine vesicle has flourished is so changed by the process that it continues thereafter to affect the constitution of the blood in such a way that the poison of small-pox cannot flourish therein; and this hypothesis accords with the fact that in the case of the loss of the limb upon which the vaccine cicatrix occurred the susceptibility to unmitigated small-pox has been found to return." *International Review*, January, 1882; page 7.



## IN ENGLAND AND WALES.

Ages.	Deaths from small-pox per each million of poplation living at specified ages.			Proportion, per cent., to total number of deaths at all ages.		
	1851-60.	1861-70.	1871-80.	1851-60.	1861-70.	1871-80.
Under 5 years.....	1,034	654	526	56.37	47.05	24.92
From 5 to 10.....	257	145	283	14.01	10.43	13.41
From 10 to 15.....	73	56	137	3.98	4.02	6.49
From 15 to 20.....	93	85	197	5.07	6.11	9.33
From 20 to 25.....	132	138	299	7.19	9.92	14.17
From 25 to 35.....	93	103	238	5.07	7.41	11.27
From 35 to 45.....	53	74	167	2.88	5.32	7.91
From 45 to 55.....	38	50	111	2.07	3.51	5.26
From 55 to 65.....	24	36	71	1.31	2.58	3.36
From 65 to 75.....	18	26	46	.98	1.87	2.18
Over 75 years.....	19	25	35	1.03	1.65	1.65

For ages under ten years the above tables give an average reduction of over ten per cent. in the small-pox mortality during the thirty years; while all other ages show an increase in the mortality rate varying from 30 to 80 per cent.—the increase growing with the ages. The reduction, as before stated, is due to the general vaccination of infants; the increase is due, among other causes, to the limitation of the protective power of the primary vaccination, and the neglect of revaccination.\* But, whatever the cause or causes may be, this fact is clearly established: That, as the interval from the date of a primary vaccination increases, there is an increasing renewal of susceptibility, until, in an indefinite number of individuals, the protective power of such vaccination becomes lost. The only test as to the loss of protective power, short of an attack of small-pox, is through a repetition of the operation. When such repetition is successful, it is, in itself, the evidence of danger from diminished vaccinal protection, and the remedy against such danger. No individual over the age of puberty is to be considered safe against the infection of small-pox, who, although successfully vaccinated in infancy or early childhood, has not been revaccinated with all the skill and care which should have attended the first performance of the operation. Should the primary vaccination have been anything short of typical, there is all the more reason for prompt revaccination, without awaiting the developmental changes of puberty. Exposure to small-pox infection, known or suspected, imperatively demands a repetition of the operation; and the epidemic prevalence of the disease warrants such repetition in all cases that have not been successfully vaccinated or revaccinated within the preceding two or three years. Aside from these considerations, there is good ground for recommending that the operation should be repeated every ten or twelve years up to at least the age of forty, when the susceptibility to the variolous infection begins to rapidly diminish.

### *The Question of Virus:*

During the recent small-pox epidemic, out of 153,936 tabulated primary vaccinations of school-children in Illinois, 138,488—or nearly nine-tenths of the whole number—were performed with bovine virus;

\*Among the "other causes" the most important is, probably, the so-called "deterioration of long-humanized virus," a subject treated of elsewhere.



in 76,154, out of 79,404 tabulated revaccinations among the same class, bovine virus was used—or in nearly ninety-six per cent.; and among 187,223 miscellaneous vaccinations and revaccinations, at all ages, bovine virus was used in 148,328 cases, or in nearly eighty per cent. The relative use of the two kinds of virus, in nearly half a million vaccinations and revaccinations returned to the STATE BOARD OF HEALTH, was 86.3 per cent. of bovine, and 13.7 per cent. of humanized.

A reference to the causes or reasons assigned for this marked preference for bovine virus (see *ante*, pp. 465-6,) discloses the fact that by far the greater number of physicians, at least in Illinois, select bovine on account of its "freedom from danger of communicating other diseases"—this being the reason given by eighty-six or -seven out of every hundred reporters. A very brief consideration of this topic must suffice. The one solitary disease which it is pretended or claimed may be communicated by vaccination through the use of humanized virus, is syphilis. Neither consumption, nor scrofula, nor cancer, nor rickets, nor any other constitutional disease, has ever, to the knowledge of the writer, been produced by vaccination. In over 200,000 vaccinations of which he has had either personal or intimate official knowledge—knowledge of such a nature as would make concealment of any untoward result almost impossible—he has never known any other disease than true vaccinia produced or communicated, either by humanized or by bovine virus.\*

The great majority of these 200,000 vaccinations were made with humanized virus, very many of them before bovine virus was introduced into this country. If other diseases could be communicated by vaccination with humanized virus, such an experience should have furnished some evidence of it. As to the propagation of syphilis simultaneously with vaccination, it seems to be, unfortunately, true that the venereal disease has thus been communicated in a limited number of cases—less than five hundred all told are recorded out of the millions and millions of vaccinations which have been performed. But it has been demonstrated, by competent experimenters, that vaccine lymph alone is incapable of conveying syphilis, even from a syphilitic subject; that there is no syphilitic quality in the vaccine matter itself; and if only this matter be used in inoculating a healthy child, a vaccine vesicle only, with the usual phenomena of vaccinia, will result. The admixture of blood, however, from a syphilitic subject, may produce primary syphilis in the vaccinated; but even this result does not always follow, for where the experiment of inoculating with syphilitic blood has been deliberately tried, without reference to vaccination, it has succeeded in less than fifteen per cent. of experiments. Granting, then, that all the alleged cases of vaccinal syphilis were really caused by the operation of vaccination—and that none of them should be excluded as of doubtful diagnosis; or, as being hereditary, and only related to the vaccination by coincidence of appearance, or by being aroused into activity by the vaccinal disturbance; or, as being acquired by some other mode than by the operation for vaccination—the weight of evidence and

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\*This number of vaccinations is entirely independent of those reported to him as Secretary of the STATE BOARD OF HEALTH during the past year, and of which no such intimate knowledge is claimed as that which justifies the positive assertion above made.

of professional opinion is now conclusive that these cases were due to the admixture of syphilitic blood, or some of the inoculable products of syphilis direct from a syphilitic vaccinifer, or indirectly through the medium of syphilis-infected instruments or articles, or individuals.

The practical points are: That the vaccinator should assure himself of the perfect health of the source of his vaccine virus, and of the subject to whom it is applied; that at least the same care be exercised in its application as would obtain to guard against the communication of any other disease in any other surgical operation; and that parents be cautioned against the indiscriminate handling, kissing and caressing of their children by strangers, not only during the vaccinal process, but at all times—to say nothing of exercising proper care and supervision in the selection of nurses and other attendants.

Of more practical importance than the foregoing, in the estimation of the sanitarian, are the questions as to the relative protective powers of humanized and of bovine virus; the character of the immediate results produced by each with respect to severity of constitutional disturbance and local trouble; and the promptness of action in the face of exposure. On the last two points the expressions of opinion, by those who are practically familiar with both, is decidedly in favor of humanized virus. With this, as a rule, the febrile symptoms are milder; there is less local irritation, itching, heat and tenderness; inflammation of the cellular tissue is not so severe and extensive, nor do the glands become so seriously involved; ulceration and loss of substance, abscesses, neoplasms, and the attendant eruptions, are less frequent and less serious. In addition to this, humanized virus may be depended on much more certainly than bovine to act promptly. Usually on the second or third, very seldom so late as the fourth, day after the insertion of good humanized virus, the papular stage of vaccination will begin; and be followed, with almost unvarying regularity, by complete development of the vesicle on the eighth day, and by the subsequent appearance of the "index of safety"—the specific inflammation of the skin, or stage of areola. Bovine virus, on the contrary, is subject to all degrees of delay, even up to periods of weeks. During the recent epidemic this defect of bovine virus was more than once followed by serious consequences. Not alone were lives lost among the exposed members of isolated families, where vaccination was resorted to early enough to have averted an attack, had the virus acted promptly; but epidemic outbreaks followed under similar circumstances—that is, in localities where, upon the discovery of the first case, vaccination of all unprotected or exposed was at once resorted to, with bovine virus, but which either proved so tardy in its action, or so totally inert, as to allow the disease to gain a foothold. See Details of Local Outbreaks, *passim*, for such instances.

"The loss of a day," says Seaton in his Hand-book of Vaccination, "may be the loss of a life." Hence the necessity for using virus which will act promptly, and not remain latent three, five or any other number of days. Recent experience corroborates observations made during the period from 1866 to 1873, while Sanitary

Superintendent of the city of Chicago, to-wit: That it is never too late to vaccinate after exposure, short of the actual appearance of the variolous eruption. If the vaccination be performed within three or four days after exposure, and the areolar stage, the index of safety, be reached in the normal time, an attack of small-pox will almost invariably be averted. With every additional day's delay the protective power will be weakened; but, contrary to the opinion laid down in text-books, experience proves that this protective power is not entirely exhausted until the vaccination is deferred at least up to the beginning of the febrile stage of small-pox. Of 323 cases of small-pox, tabulated in the preceding pages, in which the patients had never been vaccinated until after exposure, 365 recovered and 18 died, being a less mortality rate than among the 690 cases which occurred among those who had been vaccinated before exposure only. In some of these cases vaccination was not attempted until shortly before the beginning of the eruptive stage. A reference to the Notes appended to the Tabular Statement of 1,100 Cases, pages 296-327, inclusive, will show many instances where vaccination after exposure was successfully resorted to after the expiration of the period ascribed by Marson, Seaton and others, as the limit beyond which, "whatever the local success of the vaccination, no constitutional effects will be imparted." In these Notes will also be found the details of cases where the attempt to vaccinate with bovine virus was only successful after one or more repetitions, with loss of valuable time, or where such attempt finally proved wholly unsuccessful. With the exception of one group of six cases—a family vaccinated by the father, a layman—all the vaccinations performed with humanized virus after exposure, were successful and the patients recovered, with mild attacks of short duration. But of such vaccinations with bovine virus, over forty per cent. were failures—that is, in the sense of manifesting activity before the variolous disease began—and of this forty per cent. of failures there was thirty per cent. of fatal results.

Moreover, it has now come to be understood that vaccination has a positive therapeutic value, as well as prophylactic power. And where it is too late to exert the latter, there may still be sufficient time to make the former available, provided the virus used act promptly. Thus, if a patient be vaccinated during the febrile stage, and the vaccination progress normally—there being nothing antagonistic between the two diseases, variola and vaccinia, to prevent such normal progress—the areolar stage of vaccination will be reached before the dangerous tenth day of the variolous disease; and, as has been repeatedly witnessed, the graver disease will be aborted, jugulated, or materially modified. As a concrete illustration of this abortive power of vaccination the following instance, which has been almost exactly paralleled in the recent epidemic, may be here cited: Of three children, equally exposed to a case of small-pox at the same time, one has been vaccinated and the other two are unprotected. The former escapes entirely; but, after the usual period of incubation, both the latter exhibit symptoms of small-pox. One of these is at once vaccinated on the appearance of these symptoms—that is, in the febrile stage; but the other remains unprotected. The disease seems equally severe in both up to the eighth or ninth



day, when the vaccinated child begins to improve; the pustules dry up, no secondary fever follows, and in a few days the patient is dismissed, convalescent. In the unvaccinated child, the disease runs the usual course of unmodified small-pox, and during the tenth to twelfth days—the period of greatest mortality, and when the other child is entirely out of danger—this one has about equal chances for and against recovery. An added significance is given by these facts to the choice of humanized virus in all cases of emergency. Under ordinary circumstances, as when vaccinating in the absence of an epidemic or of known or suspected exposure, and when time is not essential, these considerations will, of course, have less weight; but they are of sufficient importance to be better known and understood than experience shows them to be.

Concerning the sole remaining point which should influence in the decision of the choice between humanized and bovine virus—that is, the question of protective power—it will simplify the discussion if, remembering that humanized virus is admitted to have “succeeded admirably in retaining its power for the first twenty-five years of its use,” it be further remembered that bovine-virus vaccination was only introduced so lately as 1866 in Europe, and 1870 in this country; and that, therefore it is, as yet, too soon to pronounce upon the absolute protective power of bovine virus. It is probable that such virus is fully as protective as humanized virus; but that it is any more so cannot properly be claimed until it has been submitted to the same tests as the latter. It may, however, be freely admitted that, if other things were equal—as to promptness of action, uniformity of results, mildness of symptoms, and degree of protective power—bovine virus has—in addition to the moral advantage arising from the popular belief in its harmlessness as regards other diseases—two other important merits, to-wit, certainly of supply, and freedom from possibility of deterioration of whatever degree of protective power it may ultimately be found to possess. This certainty of supply will always make bovine virus desirable, especially in this country, where, in the absence of a compulsory vaccination system, or of State or other provision for maintaining an adequate supply of humanized virus, there is constant danger of a vaccine famine, such as was experienced in many localities during the recent epidemic.

There remains, then, to consider the charge that humanized virus has undergone a serious loss of protective power—such loss as to make long-humanized virus unreliable, and to demand the substitution of bovine virus therefor. This charge has recently been formulated in the following series of propositions,\* based upon the experience in England, more especially:

I.—That the protection against small-pox afforded by the vaccine lymph in use, though still great, has become much less than it was when the lymph had undergone comparatively but few transmissions through the human subject.

II.—That the number of cases of small-pox occurring per million of vaccinated persons is very much greater than that shown in the records of vaccinated populations in the earlier part of the century.

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\* Cameron, in the *Fortnightly Review*, May, 1881.



III.—That the death-rate in recorded cases of post-vaccinal small-pox has progressively increased in all cases, with and without marks, from 1.75 per cent. in 1819-35, to over 10 per cent. in 1870-79, and in cases with marks from 6.9 per cent. in 1831-51 to 9.2 per cent. in 1870-79.

IV.—That this increase in mortality has been remarkable in the best vaccinated classes of cases, the death-rate in cases with three or more cicatrices in 1870-79 being twice what it was in 1852-67; and the death-rate in cases with three or more good cicatrices in 1870-79 being thrice what it was in 1852-67.

V.—That the proportion in which vaccinated children are attacked and cut off by small-pox has alarmingly increased, being many times greater during the last decade than it was thirty or forty years earlier; and

VI.—That while the death rate in small-pox occurring in unvaccinated persons has risen in the different groups recorded, and was exceptionally high in 1870-1879, the progressive advance of mortality in post-vaccinal small-pox is not to be attributable to epidemic influence, being equally observed in successive groups of cases in which the mortality from natural small-pox shows a diminution.

Every one of the counts in this indictment may be admitted; they are paralleled elsewhere in these pages in all essential features. But that these results are due to the use of long-humanized virus, *per se*, is not substantiated. If humanized virus remained unimpaired by its successive transmissions during the first twenty-five years of its use—and this is conceded even by the most interested of the advocates of bovine virus—there must be some reason for its subsequent impairment without assuming a change in character caused by its normal transmission through other human systems after Jenner's death. Jenner, himself, pointed out this reason. Everywhere throughout his writings he lays stress upon the proper performance of the operation; upon the importance of a perfect development of the vaccine vesicle, and of the undisturbed and normal progress of every stage of the vaccinal phenomena. Short of this he pronounced no vaccination to be fully protective. Still less did he countenance the use of lymph from such a non-protective vaccination, with the vain hope of securing full protection of others by it. He went further than do the advocates of the deterioration theory. They only assume that vaccine virus gradually loses its power of protecting against small-pox by successive transmissions through the human system. He asserted, after twenty years of characteristic painstaking investigation and record of facts, that the virus may undergo a change that will render it unfit for further use by passing even from one individual to another; and he pointed out the causes which might produce such change, and the indications by which such change might be recognized. Vaccine lymph from a perfect eighth-day vesicle—produced upon the arm of a healthy subject by lymph transmitted from arm to arm continuously since the original operation by Jenner himself—will to-day produce, in another healthy subject, the same vaccinal phenomena, identical in every respect of time, of appearance, duration and disappearance, and resulting cicatrix, as those produced in 1798 by Edward Jenner in England, or

in 1800, by Benjamin Waterhouse in the United States; and will confer as great a degree of protection, in this eighty-sixth year of vaccination, as did the original operations.

Increasing frequency of small-pox, within the last thirty years among vaccinated persons, and the greater death-rate of post-vaccinal small-pox in the same period, are not to be ascribed to any loss of protective power in humanized virus; but rather to the causes elsewhere pointed out—to ignorance and want of care in the performance of the vaccinal operation; to absence of intelligent supervision over the progress of the vaccinal phenomena; to the use of virus from defective or non-protective vaccinations; and to the neglect of revaccination at the proper intervals.

To sum up, briefly, the foregoing considerations, on the choice of virus: Bovine virus has to recommend it—(1), convenience and certainty of supply; (2), popular favor on account of its freedom from danger of transmitting other diseases peculiar to mankind. Humanized virus has—(1) promptness and uniformity of action; (2), mild, local and constitutional symptoms; (3) facility of propagation by every physician for himself, whereby he may be assured of the character of the material he is using.

#### PRACTICAL CONCLUSIONS AND PROPOSITIONS.

In the foregoing pages—The Small-Pox Epidemic of 1880-82; Vaccination in Illinois; and The Relations of Small-Pox and Vaccination—it is believed that the foundation has been laid for the following propositions and conclusions, based upon practical experience and supported by the concurrent testimony of a large number of competent observers. These are offered as an epitome of the subject, for the consideration of legislators; of municipal, sanitary and other authorities; of individual members of the community—parents, guardians, employers and others; and of the medical profession—each and every one of which classes owes a duty to the public welfare in this connection.

It has been demonstrated—

I.—That Small-Pox has increased in frequency of outbreak in Illinois, and in the extent of territory invaded in each successive outbreak, during the past thirty years; and that such outbreaks are costly in human life and suffering, as well as from a merely material standpoint.

II.—That such increased frequency has kept pace with (a) the natural growth of population; (b) the increase of population by immigrants; and (c) the multiplication of means and facilities of communication. By the first and second of these factors, (a) and (b), the number of unprotected individuals, *i. e.*, those susceptible to the small-pox contagion, accumulates from time to time up to the point when the introduction of the contagion from without is sufficient to cause an epidemic outbreak. By the second and third of these factors, (b) and (c), the contagion is introduced and disseminated, whenever the disease becomes prevalent in countries or places with which this country has commercial relations, and especially when, during such prevalence, foreign immigration rises above the average.

III.—That not only may such epidemic outbreaks be prevented with absolute certainty by Vaccination, *universally* and *properly* performed; but the disease itself might be entirely eradicated, and its reproduction be rendered practically impossible if every individual were efficiently vaccinated in infancy, and the operation repeated at proper intervals of time.

IV.—That in order to secure the universal performance of vaccination in this country—whereby epidemic outbreaks, at least, may be positively prevented—it is necessary to supplement whatever measures of compulsory enforcement may be deemed advisable, by the education of the people to a correct estimate of the value of the operation, and of its freedom from evil results, when intelligently and properly performed: such education entailing upon the medical profession and upon sanitary authorities the imperative duty of securing its proper and intelligent performance.

V.—That compulsory vaccination of all public scholars before admission to the school-room, as well as of their teachers, is justifiable if on no other ground than that it is the duty of the State, which in other ways directs and superintends the matter of public instruction, to guard against the interruption of schools by the prevalence of small-pox: and in like manner it is the right of the State to demand such precautions on the part of inmates, employes and officers of State institutions as will secure them against the invasion of this disease. So, too, the State may demand that common carriers and others especially exposed to the contagion and to the risk of conveying it from place to place, shall protect themselves against such exposure and risk.

VI.—That vaccination, compulsorily secured to the extent indicated in the previous proposition, in addition to that voluntarily procured by the large majority of intelligent persons, might be made so popular and its value so apparent, by its *proper* performance, as to largely obviate the necessity for any other measures of legal enforcement in order to secure its substantially universal performance in all enlightened communities.

VII.—That since few communities are yet so enlightened as not to embrace a certain proportion of negligent, prejudiced or ignorant individuals, compulsory vaccination—enforced by legal provision and supervised by competent sanitary authority—is necessary to the present protection of communities from epidemic outbreaks of small-pox, and to the ultimate extinction of its contagion. Neither of these desirable results can be attained with a disease so exceptionally contagious as this, so long as even a few individuals remain unvaccinated, to become propagators, conveyors and diffusers of the poison. The extreme right of any individual to risk his own health or life would be tenable only so far as the exercise of such right could be demonstrated not to involve risk or injury to others. Such demonstration is practically impossible in the case of small-pox; and it is both the right and the duty of the State and local authorities to enforce the employment of a measure of protection which, when efficiently and properly performed, has been shown to be adequate against the scourge of small-pox—as was abundantly proven, during the recent epidemic, by the results of the action, in this direction, of the STATE BOARD OF HEALTH and of local authorities.



VIII.—That the proper performance of vaccination demands in greater degree than is usually bestowed: Care in the selection of virus; painstaking in the details of the operation; intelligent, experienced supervision over the progress of the vaccinal disease; and inquisition into the sufficiency of the vaccinal protection, by revaccination from time to time.

IX.—That the charges of failure of vaccination as a protection against small-pox—and so much of the hostility to this measure as is not due to ignorance or unreasoning prejudice—have grown out of a culpable neglect of the essentials of vaccination, for which the medical profession and medical teachers are, primarily, and still very largely, responsible. Wherever vaccination is now as skilfully and intelligently performed and supervised as it was by Jenner and his immediate co-workers, it secures as great a degree of protection, with as few drawbacks and objections, as did their operations. It is, therefore, the duty of medical preceptors and teachers to give the proper amount of practical instruction concerning vaccination to their students; and of individual practitioners to invest the operation with the importance and dignity to which the transcendent value of its results entitles it.

X.—That the alleged deterioration of humanized virus, and consequent loss of protective power, may be true only to this extent, to-wit, that every successive transmission of the virus through the human system increases the chance that want of necessary care and attention may result in the use of virus which is not the product of a typical vaccination, and which may thence be wanting in the normal degree of protective power. It is incumbent, therefore, upon every vaccinator to fully assure himself of the quality of his virus; and to this end there is no more certain way than by propagating and preserving it for himself. Should there, at any time, arise a doubt as to the character of the supply, it must be promptly discarded, and a new source established by recourse to bovine virus, scrupulously selected from a reputable and responsible propagator. A few removes of this from its original bovine source will readily modify its severity; and for many reasons such virus, humanized to this extent, is practically preferable to any other.

XI.—That the relative advantages of bovine and of humanized virus are still *sub judice* as to the most important point, namely, their comparative protective powers. Humanized virus has been tested for more than eighty years; bovine for about sixteen. The former, descended in an unbroken line of vaccinations from the original operations of Jenner, still produces the same typical results, the same regular sequence of phenomena, as those obtained by Jenner himself; the latter produces almost as many varying results as there are propagators. The product of some of these is uniformly excellent, and its protective power, doubtless, as perfect as that of the true Jennerian lymph. In cases of emergency, however, where promptness of action is important, the preference must be given to the humanized. As to freedom from communicating other disease, it is abundantly proven that it is a physical impossibility for pure vaccine matter, either bovine or humanized, to produce any other



disease than true vaccinia; that the vaccinal disease is as truly *sui generis* as is small-pox itself, and cannot be converted into, or produce, any other constitutional disease.

XII.—That, since small-pox occasionally occurs more than once in the same individual—thus proving that the susceptibility may be renewed—revaccination is the absolutely essential complement of primary vaccination; and should not alone be performed in all cases at or about the period of puberty, but should be repeated on all occasions of exposure, as well as during the epidemic prevalence of small-pox in any case where the sufficiency of the vaccinal protection may be the subject of doubt. And, finally,

XIII.—That while, on the one hand, with the exception of an infinitesimally small number of insusceptible individuals, every unvaccinated person would contract small-pox in the course of a natural life-time, if exposed to the contagion, and fully one-half of those attacked would die, while of the survivors a large number would be hideously disfigured, maimed and disabled; on the other hand, if efficiently vaccinated and revaccinated, an equally infinitesimal number of hyper-susceptible individuals would contract the disease on exposure, and of this small number less than one in a hundred would die. La Condamine states that one-tenth of the human race, on the average, died annually of small-pox for centuries before the discovery of vaccination; during which period, in the language of Macaulay, the disease was always present, filling the church-yards with corpses, leaving on those whose lives it spared the hideous traces of its power, turning the babe into a changeling at which the mother shuddered, and making the eyes and cheeks of the betrothed maiden objects of horror to her lover. For this devastating and constant pestilence, Jenner substituted a mild affection of only a few days' duration; never causing death, suffering or disfigurement, when properly and intelligently produced; and conferring an immunity from the graver disease proportionate to its thoroughness and efficiency. To neglect or oppose its universal introduction is to carelessly, ignorantly or criminally invite avoidable suffering, disaster and death.

It would seem as though facts so incontestably proven as these, would only need to be properly brought to the attention of the public—and especially of parents and those having charge of the young—in order to secure the universal and proper performance of Vaccination.



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# OFFICIAL ORDER

CONCERNING THE PREVENTION OF SMALL-POX.

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## OFFICIAL ORDER

### CONCERNING THE PREVENTION OF SMALL-POX.

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THE following is the revised text of the Official Order of the ILLINOIS STATE BOARD OF HEALTH, Concerning the Prevention of Small-Pox, re-enacted January 1, 1882. The fifth edition, published in May, 1882, was thus prefaced:

ILLINOIS STATE BOARD OF HEALTH.  
OFFICE OF THE SECRETARY, SPRINGFIELD, ILL., May, 1882.

WHILE small-pox is diminishing in the State at large, there still occur outbreaks of the disease wherever the infection finds a community, or family, or individuals, not protected by recent vaccination.

Such persons are generally (but not entirely) found now only in the country or small settlements, where it has been difficult, during the past winter, to procure virus, or the services of a vaccinating physician; or where there has been a prejudice against vaccinating until warmer weather.

These difficulties and objections no longer exist. Virus is plentiful; the great demand upon physicians has largely subsided; the weather is mild and favorable, so that there is little or no danger of complications from rigorous or changeable temperature; and there is now no reasonable excuse for neglecting this simple and only efficient safeguard.

Notwithstanding the proposed sanitary inspection of immigrants—by which it is hoped to check the further importation of the disease—there is no certainty that any given group of these people, now arriving in thousands every day, may not carry the infection into any township or locality, no matter how remote or secluded, and there cause an outbreak which will be limited only by the number of unprotected subjects who may be exposed.

I. In view of these facts it is the duty of those charged by law with the care of the public health—

First, and most importantly, to secure at once such a condition of every individual, child and adult, as will make him or her safe, even if exposed to the contagion. *This can be certainly, readily and inexpensively done by enforcing proper vaccination or revaccination, as the case may be.*

Secondly, to be vigilant against the introduction of the disease from without—as for example, by a watchful supervision of hotels, lodging-houses and other resorts of travelers, and especial scrutiny

of immigrants and new settlers. Although this is of incidental importance if the first injunction be obeyed, cases may occur where a non-intercourse quarantine might be justifiably enforced—as where a notoriously infected locality is lax in its protective measures, or allows its small-pox patients to wander off to other places.

Finally, it is the duty of all health authorities to be prompt and vigorous in enforcing such well-advised measures in the care of those who may, unfortunately, become afflicted (and of their families and households) as will prevent any spread of the disease. Under no circumstances must such cases be allowed to go at large, or be sent away to escape the cost and care of their proper treatment. *They must at once be rigidly isolated*, if necessary at the expense of the town, city or county; or, if transferred by arrangement to a neighboring small-pox hospital, the transfer must be effected in such a manner as to avoid the risk of spreading the contagion in transit.

II. In furtherance of these ends the appended *Rules and Regulations* of this BOARD—originally promulgated in March, 1881,—are again published, *with the knowledge that wherever they have been thoroughly carried out, small-pox has either been averted where it threatened, or readily controlled where it had already appeared.* A sanitary necessity still exists, and the BOARD is compelled, in the interest of the public health, to use the power conferred upon it by law to meet such necessity.

This order is issued in conformity with the statute, which charges the STATE BOARD with authority in all matters pertaining to quarantine, and with the duty of making all necessary rules and regulations for the preservation or improvement of the public health; and such rules and regulations have, therefore, the weight and authority of law. By the same statute their enforcement is made binding upon all health authorities in the State. Such authorities embrace—

1. Regularly constituted *Boards of Health* of incorporated cities, towns and villages.
2. *Supervisors, assessors and town clerks* of townships; and
3. *County commissioners* of counties in which there are no township organizations.

The officers designated in the second and third classes constitute, *ex-officio*, the Boards of Health, for their respective territories, in the absence of any other provision therefor.\*

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\*In this connection attention is again called to the following *Order* of the STATE BOARD, made at its regular meeting, September 30, 1881.

Under the authority conferred upon the STATE BOARD OF HEALTH by section 2 of the State Board of Health Act, it is ordered that, on and after January 1, 1882, the first cases of small-pox occurring in any county, township, town or city in this State, as also the prevalence and progress of *any* epidemic, shall be promptly reported to the BOARD by the local health authorities; it being borne in mind that in counties where township organization exists, the township board is the Board of Health, and in counties not under township organization, the county commissioners act in like capacity.

Reports of first cases must be made immediately upon discovery; and of the progress of the disease from time to time, at least weekly. Forward all reports to the *Secretary, State Board of Health, Springfield, Illinois.*

All and singular of these are hereby charged with the enforcement of the ORDER and its appended rules. *Small-pox can be either totally excluded from any given community, or confined to the first cases by so doing.* If it spread beyond the first cases, it is because of criminal neglect of these precautions, *for which neglect those who are responsible should be held accountable by their constituents.*

[This assertion may be qualified in its application to large cities or other distributing points for newly-arriving immigrants. But even in such, with a proper system of rail and river inspection and vaccination of the unprotected, small-pox may always be held in control, as has been signally demonstrated in the city of Chicago, where, since the inauguration of the Immigrant-Inspection Service, the disease has practically disappeared, notwithstanding the enormous influx of immigrants and great number of the transient population. The sanitary administration of the city in this respect has been most efficient and successful.]

All needed power and authority for the enforcement of these rules are provided by the law, and should be unhesitatingly employed whenever necessary. Police officers, sheriffs, constables, and all other officers and employes of the State are specifically enjoined by the statute to aid in the enforcement of such rules and regulations.

III. In this enforcement, if a question should arise as between private rights or interests and the interests of the health of the community, the public interest must be held paramount. Therefore, to the question, which is often asked of this Board, as to the *right* of recompense for losses incurred by the destruction of infected clothing or other effects, a negative answer must be returned. No individual has the right to preserve contagion or infection about his premises, whereby the public health may be endangered. If the destruction of the infected material be necessary in order to destroy the contagion or infection, the loss must be borne by the owner; it cannot be recovered from the community.

As to the policy and expediency of reimbursing such losses, that is a question for the consideration of the proper authorities—town, city or county; and cases might arise in which relief would properly be afforded—as, for example, where such destruction would entail great hardship upon an indigent person.

Should the property of an innocent owner become infected through the preservation of known infected material—which it was the duty of the health authorities to cause to be destroyed—the value of such property, if destroyed, to protect the public health, may be recovered under the constitutional provision that private property shall not be taken for public use or benefit without just compensation. This, however, applies only to the property of persons who are not in any wise responsible for the contagion, and who have taken reasonable precautions to prevent or avoid it.

IV. It is competent for local boards of health, as above defined, to incur expense for the vaccination of those who are unable to pay for the same; and they may, also, make such other expenditures, as, in the exercise of a sound discretion, may seem prudent and necessary either to effect a cure or to prevent the spread of any

epidemic, contagious or infectious disease—as, for example, by establishing a small-pox hospital, employing a small-pox physician, etc. Expenses so incurred should be paid out of the general fund of the body (town, city or county,) incurring the same.

Concert of action between neighboring towns or communities, whose sanitary interests are often identical, is strongly enjoined upon the health authorities. Friction, clashing of authority and unnecessary expense may thus be avoided. Where there is no medical man upon a board of health, the advice and coöperation of the county medical officer should be secured; or, if this be impracticable, a competent and legally-qualified physician should be employed. If a district or locality become seriously infected, better work will be secured, with less danger of the contagion being spread, if such district or locality be put in charge of one medical officer, instead of allowing several physicians to visit individual patients or families. Such officer should be selected with an eye not only to his medical skill and experience, but also to his knowledge and ability as a sanitary executive.

Local boards and authorities are strongly advised against the policy of concealment. Small-pox cannot be suppressed by denying its existence. It *will* out, more certainly than murder. Official reticence in this is not only useless to protect commercial interests and reputation, but is in the highest degree mischievous, in that it begets false confidence, which may lead the innocent and unwary into such danger as an honest announcement of the facts would have warned them to avoid. Insist upon prompt publicity in every instance.

The following rules are believed to cover every important detail, and are part and parcel of this ORDER, to be strictly enforced in appropriate cases. A copy should be left in every house where there is a case of small-pox, and their republication in the local papers, or otherwise, is recommended. By this means a more ready obedience and intelligent coöperation will be secured, of the first importance in the present emergency.

No disease can be so surely prevented or controlled as small-pox. Its existence in a community argues unjustifiable prejudice, carelessness or ignorance, for neither of which is there any excuse.

By order of the Board:

JOHN H. RAUCH, M. D., *Secretary*.



## RULES AND REGULATIONS

### FOR THE PREVENTION OF THE SPREAD OF SMALL-POX.

1. *Vaccination.*—Upon the first appearance of a case of small-pox in a given locality, systematic vaccination or revaccination must be at once resorted to—*vaccination* and *revaccination* in all cases where the operation has not been successfully performed within the past year. Recent experience has shown such an unusual susceptibility, both to the small-pox poison and to the vaccine virus, that it is not prudent to rely on an old vaccination, no matter how typical the scar may be. The inconvenience of vaccination is trifling compared with an attack of small-pox. If it doesn't "take," one may be assured of his safety if exposed—*provided*, the operation has been properly performed. If it does "take," it is conclusive evidence that the individual was in a condition to have contracted small-pox if exposed.

Vaccination should in all cases be performed by a legally qualified physician; and too much care cannot be exercised in the selection of virus and the performance of the operation. It is recommended that a certificate be given to each person vaccinated, and the STATE BOARD will, on certain conditions, furnish blanks for this purpose on application. It is further recommended to managers, directors, superintendents, and others employing or having control of numbers of persons—as railroads, commercial and manufacturing establishments, private schools, colleges, universities, penal and reformatory institutions, asylums, public offices, steam-boats, etc.—that they make vaccination obligatory upon all such persons.

Local boards and health authorities have the right to order compulsory vaccination at any time, and their orders may be enforced under penalty; or persons refusing to be vaccinated may be quarantined and otherwise treated as small-pox patients or "suspects," until the period of danger has passed. Where such persons (that is, those refusing to be vaccinated) are known to have been exposed to the contagion—as, by visiting or living in close proximity to infected houses—they must, in all cases, be secluded from observation during the usual period of incubation.

2. *Isolation and Quarantine.*—Whenever it is made known that any person is sick with small-pox or varioloid, isolation of the individual must be promptly and rigidly enforced. Every one in the house must be vaccinated or revaccinated, no matter how recently this may have been done, nor how mild the disease may appear. In view of the recognized difficulty of a positive diagnosis in every case, any reasonable doubt should be resolved in favor of wise precaution. It is by no means necessary that a case should present all the typical symptoms in order to initiate a malignant epidemic—even a mild case, with little or no eruption, may do this. Local health authorities cannot too strongly insist upon this important point.

In towns or cities where there are small-pox hospitals, it is better that the patient should be removed to such at once. Where there is no such provision, the infected house should be strictly quarantined, and, if necessary, the police authority must be invoked to secure proper restrictions. Under no circumstances should the inmates of such a house be allowed to go away from the premises, except by written permission of the health authorities. An improvised hospital will be an absolute necessity if the case occurs in a crowded family or tenement-house, where proper isolation cannot be secured. In such case, a barn, outhouse or other building can usually be made sufficiently comfortable for the patient, at small expense; or, if the weather be mild enough, a tent may be used. A yellow flag or placard, bearing the words, "SMALL-POX HERE!" should be prominently displayed upon the house, and not removed until permission is given by the health authorities. *Isolation and non-intercourse are matters of the utmost importance.* (See page 2, [326] concerning the transfer of patients from one locality to another.)

3. *The Sick-Room.*—The room selected for the sick should be large, easily ventilated, and as far from the living and sleeping-rooms of other members of the family as it is practicable to have it. All ornaments, carpets, drapery, and articles not absolutely needed in the room, should be removed. A free circulation of air from without should be admitted, both by night and day—there is no better disinfectant than pure air. Place the bed as near as possible in the middle of the room; but care should, of course, be taken to keep the patient out of draughts.

If the room connects with others which must be occupied, lock all but one door for entrance and exit, and fasten to the door-frame—top, bottom and sides—sheets of cheap cotton cloth, which must be kept wet with *thymol water* (see page 8 [531]), or chloride of zinc solution—two drachms of chloride zinc to a half gallon of water. Over the door to be used, the sheet must not be tacked at the bottom nor along the full length of the lock-side of the frame, but about five feet may be free to be pushed aside; this sheet, however, must be long enough to allow ten or twelve inches to lie in folds on the floor, and must, also, be kept wet with the disinfectant.

4. *Precautions in the Sick-Room.*—All discharges from the nose and mouth of the patient should be received on rags and immediately burned, and the same precaution should be taken with the crusts as they fall off. Night-vessels should be kept supplied with a quart or so of the *Copperas Disinfectant* (see page 8 [531]). Into which all discharges should be received. All spoons, dishes, etc., used or taken from the sick-room, should be put in boiling water at once.

A pail or tub of the *Zinc Disinfectant* (see page 8 [531]) should be kept in the sick-room, and into this all clothing, blankets, sheets, towels, etc., used about the patient or in the room, should be dropped immediately after use, and before being removed from the room. They should then be well boiled as soon as practicable.

5. *Attendants*.—Not more than two persons—one of them a skillful, professional nurse, if possible—should be employed in the sick-room, and their intercourse with other members of the family must be as much restricted as possible, and with the public only by written permission of the health authorities. All attendants should be revaccinated before taking charge of a small-pox patient.

In the event that it becomes necessary for an attendant to go away from the house, a complete change of clothing must be made, using such as has not been exposed to infection; the hands, face and hair should be washed in thymol water, or chloride of zinc solution. Following this, free exposure to the open air should be secured before approaching any one.

6. *Physicians and Visitors*.—Physicians and other necessary visitors, before entering the sick-room, should put on an outer garment, closely buttoned up, and a handkerchief or wrap about the throat and neck. Such outer garment may be a linen duster or rubber overcoat; and this, together with the neck-wrap, should be taken off in the open air immediately after leaving the sick-room, and either be dipped in the *Zinc Disinfectant*, or hung up in an out-of-the-way place exposed to the air, until the next visit. Safety consists in exposing to the open air every article of clothing that has been in any way subjected to the contagion.

Whenever practicable, the precautions above prescribed (Rule 5) for an attendant leaving the sick-room, should be observed by the physician or visitor. Doctors and clergymen may convey contagion as readily as the laity under similar conditions; they should, therefore, take the same precautions. This advice applies also to revaccination at the beginning of an outbreak. Several instances of physicians and clergymen falling victims to the disease, have come to the attention of the BOARD. It should be remembered that, whereas the average period of incubation for small-pox is from twelve to fourteen days, vaccination acts in from six to eight. By vaccination, therefore, one may guard against the result of an exposure, even for some days after.

Physicians and clergymen may do much toward securing an intelligent compliance with these rules, both by precept and example, and their assistance should be invited in all cases.

7. *Miscellaneous*.—No inmate of the house, during a continuance of the disease, should venture into any public conveyance, or assemblage, or crowded building, such as a church or school; nor, after its termination, until permission is given by the health authorities. Letters must not be sent from the patient, and all mail matter from the house should first be subjected to a dry heat of 250–260° F. Domestic animals, dogs, cats, etc., should not be allowed to enter the room of the patient, or, better still, should be excluded from the house. During the entire illness the privy should be thoroughly disinfected with the *Copperas Disinfectant*, three to five gallons of which should be thrown into the vault every three or four days. Water-closets should be disinfected by pouring a quart or so of this disinfectant into the receiver after each use.

8. *Care after Recovery*.—After recovery has taken place, the patient should be bathed daily, for three or four days, in a weak disinfectant—the thymol water or a solution of chloride of zinc (two drachms of the salt to a half gallon of water). The head should be thoroughly shampooed during each bath, and the convalescent be then clothed in fresh, clean garments that have been in no way exposed to the infected air. Patients should be kept in the house at least two weeks after the crusts have all disappeared.

9. *Death and Funerals*.—In the event of death, the clothing in which the body is attired should be sprinkled with thymol water, the body wrapped in a disinfectant cere-cloth (a sheet thoroughly soaked in the *Zinc Disinfectant*, double strength,) and placed in an airtight coffin, which is to remain in the sick-room until removed for burial. No public funeral must be allowed either at the house or church, and no more persons should be permitted to go to the cemetery than are necessary to inter the corpse.

The local authorities must take charge of burials, and superintend the preparation of the bodies.

10. *Disinfection and after Treatment of Premises*.—After recovery or death, all articles worn by, or that have come in contact with, the patient, together with the room and all its contents, should be thoroughly disinfected by burning sulphur. To do this, have all windows, fire-places, flues, key-holes, doors and other openings securely closed by strips or sheets of paper pasted over them. Then place on the hearth or stove, or on bricks in a wash-tub containing an inch or so of water, an iron vessel of live coals, upon which throw three or four pounds of sulphur. All articles in the room and others of every description that have been exposed to infection, which cannot be washed or subjected to dry heat, and are yet too valuable to be burned, must be spread out on chairs or racks; mattresses or spring beds set up so as to have both surfaces exposed; window-shades and curtains laid out full length, and every effort made to secure thorough exposure to the sulphur fumes. The room should then be kept tightly closed for twenty-four hours. After this fumigation—which it will do no harm to repeat—the floor and wood-work should be washed with soap and hot water, the walls and ceiling whitewashed, or, if papered, the paper should be removed. The articles which have been subjected to fumigation should be exposed for several days to sunshine and fresh air. If the carpet has unavoidably been allowed to remain on the floor during the illness, it should not be removed until after the fumigation; but must then be taken up, beaten and shaken in the open air, and allowed to remain out of doors for a week or more. If not too valuable, it should be destroyed; but, whenever practicable, it should be removed from the room at the beginning of the illness. After the above treatment has been thoroughly enforced, the doors and windows of the room should be kept open as much as possible for a week or two. Where houses are isolated, articles

may be exposed out of doors. The entire contents of the house should be subjected to the greatest care, and when there is any doubt as to the safety of an article, it should be destroyed.

All this work must be done—both the disinfection and the destruction of property—under the direct supervision of the local authorities.

11. *Treatment of Clothing, Bedding, etc.*—Such articles of clothing, bedding, etc., as can be washed, should first be treated by dipping in the *Zinc Disinfectant*; they should then be immediately and thoroughly boiled.

The ticking of beds and pillows used by the patient should be treated in the same manner, and the contents, if hair or feathers, should be thoroughly baked in an oven. If this cannot be done, they should be destroyed by fire, as should, in any event, all straw, husk, moss or "excelsior" filling. The clothing of nurses should be thoroughly fumigated and cleansed before it is taken from the house, or, better still, burned, if feasible.

In this connection, attention is called to the fact that the disease has already been conveyed between widely-distant points, during this epidemic, through the medium of rags and paper-stock. In the present emergency, authorities will do well to quarantine shipments of these articles, unless accompanied by a certificate of their disinfection under competent supervision. In any event, it is incumbent upon owners of establishments in which such articles are handled to insist upon the vaccination or revaccination of all persons engaged in the work.

12. *Finally*, if, from neglect or delay in enforcing precautionary measures, the disease shows a tendency to become epidemic, the public and private schools must be closed, church services suspended and public assemblages of people, as at shows, circuses, theatres, fairs, or other gatherings, be prohibited. Neighboring communities are justified in declaring and maintaining a non-intercourse quarantine against any place in which, by neglecting the enforcement of this ORDER, small-pox is allowed to assume epidemic proportions.

### BEST DISINFECTANTS.

Sunlight, fresh air, soap and water, thorough cleanliness—for general use.

For special purposes the following are the most efficient, the simplest and the cheapest.

#### I.—Copperas Disinfectant.

Sulphate of iron (copperas).....one and one-half pounds.

Water.....one gallon.

A convenient way to prepare this is to suspend a basket containing about sixty pounds of copperas in a barrel of water. The solution should be frequently and liberally used in cellars, privies, water-closets, gutters, sewers, cesspools, yards, stables, etc.

#### II.—Sulphur Disinfectant.

Roll sulphur (brimstone).....two pounds.

To a room ten feet square, and in the same proportion for larger rooms. See Rule 10 for mode of use.

#### III.—Zinc Disinfectant.

Sulphate of zinc (white vitriol).....one and one-half pounds.

Common salt.....three-quarters of a pound.

Water.....six gallons.

For application and modes of use see Rules 4, 6, 9 and 11.

#### IV.—Thymol Water.

Made by adding one tablespoonful *Spirits of Thymol* to a half a gallon of water. *Spirits of Thymol* is composed of—

Thymol.....one ounce.

Alcohol, 85%.....three ounces.

May be used for all the disinfectant purposes of carbolic acid; it is quite as efficient and has an agreeable odor. See Rules 3, 5, and 9, for application and uses. Where thymol is not available, chloride of zinc solution may be used—half an ounce of chloride of zinc to one gallon of water.

*This Order should be Preserved for Reference.*



## NOTE TO THE LAST EDITION.

THE first edition of this Circular was published in March, 1881, since which time some 75,000 copies have been printed and distributed throughout the State. The fifth and last edition—that of May, 1882—contains some allusions which are now out of date, those, for example, to the “past winter”—to the “mild and favorable weather”—and to the “proposed sanitary inspection of immigrants.” Aside from these, the comments, advice and instructions of this edition are as applicable now as when originally published. Their practical test in numerous instances, has proven their sufficiency, and the remainder of this edition is now being distributed, as occasion requires, with no other change or addition than as contained in this Note.

With reference to the rights, duties and powers of health authorities in the matters of Vaccination, Isolation and Quarantine (see Rules 1 and 2,) it may be noted that in the early part of December, 1882, a suit was tried in the Mercer County Circuit Court, in which the plaintiff charged the Board of Health of Cable with trespass and false imprisonment—damages \$10,000. The damages were alleged to have been sustained by the enforcement of the quarantine rules and regulations of the local board, which were based upon the rules and regulations of the STATE BOARD, contained in this Circular. During the trial the question arose as to the authority to make and enforce such rules and regulations. The verdict of the jury was rendered in favor of the local board, thus sustaining its authority to enforce such measures as, in the exercise of a wise discretion, were deemed necessary for the protection of the public health.\*

Still more recently, in charging the Grand Jury at Paterson, N. J., Judge Dixon called attention to the case of a man employed as nurse in a small-pox hospital, and who without proper precautions, visited his family, communicating the disease to his children, one of whom died therefrom. Hereupon Judge Dixon says: “If a man, conscious that he carries about with him the germs of a contagious disease, recklessly exposes the health and lives of others, *he is a public nuisance and a criminal, and may be held answerable for the results of his conduct.* If death occurs through his recklessness he may be indicted for manslaughter. It is held that where a person knowingly communicates a contagious disease to another, and death results, the crime is manslaughter.” Applying the law to the nurse’s case, the judge instructed the jury that the man might be indicted for manslaughter, if it was found that there had been criminal negligence on his part; and that he might be indicted for spreading the disease by conscious exposure of others thereto, by his presence in public places, as on the streets, in halls, etc.—and this even though no evil consequences had followed, on the charge of being a public nuisance endangering the public health. “The law provides some penalty for such offense against the public safety.” In other and older phrase: **THE WELL-BEING OF THE PEOPLE IS THE SUPREME LAW.**

These instances are cited in answer to frequent inquiries addressed to the BOARD, as to the extent to which courts and juries will sustain health authorities in their efforts to prevent the spread of epidemic contagion or infection.

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\* The plaintiff appealed from the judgment in the Circuit Court; but at the May, 1883, term of the Appellate Court of the Second District, the judgment was affirmed. See *ante*, pp. 279-282.



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PROCEEDINGS  
OF THE  
SANITARY COUNCIL  
OF THE  
MISSISSIPPI VALLEY.

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# FOURTH ANNUAL MEETING

## OF THE

### SANITARY COUNCIL OF THE MISSISSIPPI VALLEY.

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THE Fourth Annual Meeting of the SANITARY COUNCIL OF THE MISSISSIPPI VALLEY was held in Cairo, Ill., April 19-20, 1882, representatives from the following organizations being present:

#### STATE BOARDS OF HEALTH.

Arkansas—J. A. DIBRELL, Jr., M. D., Secretary.

Illinois—JOHN H. RAUCH, M. D., Secretary.

Iowa—R. J. FARQUHARSON, M. D., Secretary.

Kentucky—JOHN J. SPEED, M. D., Secretary.

Michigan—HENRY C. BAKER, M. D., Secretary.

Tennessee—G. B. THORNTON, M. D. Member.

#### LOCAL ORGANIZATIONS.

Keokuk, Ia., City Board of Health—D. B. HILLIS, M. D., President.

Memphis, Tenn., City Board of Health—G. B. THORNTON, M. D., President. Hon. DAVID P. HADDEN, President Legislative Council, and *ex officio* Member.

New Orleans Auxiliary Sanitary Association—GUSTAVUS DEVRON, M. D., Sanitary Director.

New Orleans Medical and Surgical Association—L. F. SALOMON, M. D., Member.

#### NATIONAL BOARD OF HEALTH.

HOSMER A. JOHNSON, M. D., Resident Member, Chicago, Ill.

ROBERT W. MITCHELL, M. D., Resident Member, Memphis, Tenn.

#### OFFICERS OF THE COUNCIL PRESENT.

JOHN J. SPEED, M. D., Louisville, Ky., President.

JOHN H. RAUCH, M. D., Chicago, Ill., Secretary and Treasurer.

#### *Endorsement of the "Harris Bill":*

The regular order of business was suspended at the forenoon session on the 16th, in order to consider what action, if any, should be taken by the COUNCIL with reference to the passage of U. S. Senate Bill No. 1049, which the Secretary stated he was informed would be reported back from the committee to the Senate during

the day. After some remarks upon the importance of the measure, which is designed to render more directly operative the provisions of the Act of June 2, 1879, in preventing the introduction of contagious and infectious diseases into the United States, the Secretary submitted the following:

*Resolved*, That the SANITARY COUNCIL OF THE MISSISSIPPI VALLEY earnestly urges the immediate passage of Senate Bill No. 1049, as amended March 22, 1882, and known as the "Harris Bill," believing that it offers speedy and certain relief from the evils of imported contagion now causing widespread sickness, death and material losses in the interior States.

On motion of Dr. Thornton the resolution as read was unanimously adopted, and the Secretary was authorized to telegraph its purport to Senator Harris in Washington.

Under the suspension of the rules Dr. Devron announced the recent death of Dr. C. B. White of New Orleans. After remarks by various members, the Chair appointed Drs. Devron, Johnson and Baker a committee to draft and present appropriate resolutions, and the COUNCIL adjourned until 2 o'clock p. m.

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At the afternoon session, April 19th, the regular order of business being resumed, the Secretary read the minutes of the Third Annual Meeting of the COUNCIL, held at Evansville, Ind., April 21-22, 1881, and which were approved as read.

Under the call for the election of new members, the Secretary presented the credentials of Dr. L. F. Salomon as a delegate from the New Orleans Medical and Surgical Association, and the question being duly put, Dr. Salomon was declared elected.

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### *Dr. C. B. White, in Memoriam:*

Dr. Devron, of the committee on resolutions, in memory of Dr. C. B. White, submitted the following:

WHEREAS, This COUNCIL has learned of the recent death of CHARLES BRAHMAN WHITE, M. D., one of its most valued and honored members; one of the first members of the American Public Health Association and its late President; for seven years President of the Louisiana State Board of Health; and for the past three years Medical Director of the New Orleans Auxiliary Sanitary Association; an able and accomplished practical sanitarian, whose labors for the protection of human life in New Orleans, his adopted home, and in the Valley of the Mississippi, have been crowned with an unusual meed of success; and

WHEREAS, Many of the members of this COUNCIL have held intimate personal and official relations with the deceased, through which they had come to respect his judgment and methods as an administrative sanitarian in the larger questions of the whole country, as well as in those of his immediate environment; therefore, be it

*Resolved*, That in the death of Dr. C. B. White, not only does New Orleans lose a gifted and useful citizen, but Louisiana and her sister States of the Mississippi Valley are thereby deprived of the services of a vigilant and valiant guardian of their health interests, and the cause of sanitary science is bereft of one of its most steadfast workers and illustrious exponents.

*Resolved*, That we, the individual members of the SANITARY COUNCIL OF THE MISSISSIPPI VALLEY, sincerely deplore the demise of our friend, co-worker and brother-member; and do hereby direct that a page in the Book of the Minutes of this COUNCIL be inscribed with the initials C. B. W.; that these resolutions be spread thereunder; and that a suitably engrossed copy of the same, signed by the President and Secretary, be transmitted to his relatives.

On motion of Dr. Rauch, the preamble and resolutions were unanimously adopted.

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*Amendment to the Constitution:*

Dr. Rauch submitted his report as Treasurer of the COUNCIL, after the reading and acceptance of which, on motion of Dr. Mitchell, the Constitution was amended as to Sec. iii, so as to read,—*The fee shall be five dollars annually from each organization having representatives in the Sanitary Council.*

*River-Inspection Service, National Board of Health:*

Under the call for "new business," the Secretary read a communication from the National Board of Health concerning its River-Inspection Service and the conditions under which it would be re-established and maintained during the ensuing season: which are, in effect, that the State and local boards of health interested shall take such action as may be necessary to secure the recognition of the certificate of inspection. The Secretary stated that the Tennessee State Board of Health, as also the local board of health of Memphis, had already taken such action; while the ILLINOIS STATE BOARD, at its regular quarterly meeting, April 13-15, 1882, had adopted a preamble and resolutions, wherein it is recited that the geographical position of Illinois and its relations with the Lower Mississippi country, by rail and river, are such as to render the State subject to invasions of yellow fever whenever that disease gets a foothold below; and that it is believed that the exclusion of yellow fever from said region can only be effected through National agencies operating for the general welfare without regard to State boundaries, and uninfluenced by merely local considerations.

*Action of the Illinois State Board of Health thereon:*

Wherefore, the ILLINOIS STATE BOARD OF HEALTH formally approves the action of such State and local boards of health as have adopted the rules and regulations of the National Board of Health, and have conformed to its advice, suggestions and requirements on this subject; renews its approval of the Mississippi River-Inspection Service of said National Board of Health; authorizes its Secretary, in the event of yellow fever appearing on the Lower Mississippi during the coming summer, to make application to the National Board, in the name of the ILLINOIS BOARD, for the establishment and maintenance of inspection stations of said Service, to be located at such points as, in his judgment, are best calculated for the protection of the State; and orders that, in such event, no railroad or steamboat travel or traffic, from any point or place within the compromised territory to any point or place within the State, be permitted, except in accordance with the rules, regulations and requirements of the National Board of Health.

*Action of the Michigan State Board of Health:*

The Secretary also read the preamble and resolutions adopted by the Michigan State Board of Health, at a special meeting held March 1st, 1882, setting forth that, as the prevention of the introduction of yellow fever into the United States is a subject of National importance, it is proper for the Louisiana State Board of Health to ask, and it is the duty of the National Board of Health

to continue to give, aid in preventing the introduction of that disease into the Mississippi Valley; to which end, and to enable the National Board to give accurate information to the sanitary organizations of the State interested, it is advised that inspectors of the National Board should be placed at Eadsport and at the Mississippi-River Quarantine Station of the Louisiana Board, while all health authorities in Louisiana and the Gulf States should furnish prompt and full information to the National Board concerning yellow fever.

In the same connection the Secretary read a series of resolutions prepared by Dr. Thornton, to be submitted to the COUNCIL, and in which the National Board of Health is formally requested to re-establish, and maintain until the middle of next October, its Inspection Service on the Mississippi River; and to place on duty at New Orleans, and other Southern ports, such inspectors as may be necessary to supervise the shipment of merchandise, baggage, etc., from said ports by rail or river.

*Connection of the Louisiana State Board of Health therewith:*

With reference to the details concerning the Louisiana State Board of Health, above alluded to, Dr. Salomon read the correspondence between Dr. Stanford E. Chaillé, Supervising Inspector of the National Board of Health at New Orleans, and Gov. McEnery; in which Dr. Chaillé inquires whether the privilege of placing an inspector of the National Board of Health at the Mississippi-River Quarantine Station of the Louisiana State Board of Health will be continued during the season of 1882; and to which the Governor replies that such privilege, accorded by his predecessor, Governor Wiltz, has not been revoked; but that it is expected the inspector will subject himself to the rules and regulations of the State Board, and shall not in anywise attempt to supervise, control or direct the actions of the quarantine physician of said Board.

*Exclusion of Imported Contagion a National Duty:*

In submitting these papers to the COUNCIL the Secretary took occasion to observe that the subject was only one branch of the larger question of National control of exterior quarantines. The exclusion of yellow fever from the Mississippi Valley is, in point of fact, embraced in measures for the exclusion of all epidemic contagious and infectious diseases,—not from a given region, but from the whole country; measures which, sanitarians are now pretty well agreed, could only be instituted and efficiently carried out by the General Government. While he objected to the assumption, by the city of New Orleans or the State of Louisiana, of sanitary control over the mouth of the Mississippi, he objected quite as strenuously to the port of New York, or any other Atlantic port being allowed exclusive authority in quarantine matters which, with our present close inter-communication, are of equal concern to distant communities and States in the interior. Experience has demonstrated that the health authorities at such ports are too heavily handicapped by local influences, commercial rivalries and other potent considerations, to permit them to satisfactorily administer such a trust as this. Their laws, ordinances and rules may look well enough on paper; but they are too often honored in the breach rather than the observ-

ance. Many of them, indeed, are obsolete in these days of rapid transportation by which an immigrant in apparently good health on arrival at Baltimore, may be found three or four days after in the interior of a Western State in the eruptive stage of small-pox; and a traveler may land here in Cairo ninety-six hours after leaving the indigenous yellow-fever zone. Twenty-five or thirty years ago this entire Western region could rely with comparative safety on the measures which New York and New Orleans resorted to for their own immediate protection. To-day, with reference to foreign countries, East and South, we are, in point of time, (which is the essence of danger from contagion), where New York and New Orleans were a quarter of a century since. We have, therefore, a right to demand that the General Government—which improves these ports and harbors, and lights and buoys them, and builds jetties, and otherwise makes them safe and profitable for commerce, and places its own officers on duty there to collect its revenues—shall also make it safe for the rest of the country to allow that commerce. As well might such a port assume the collection of import duties in its own discretion, or arrogate to itself the control of any other general measure in which the whole country has an interest, as assume the right to hurry through its gates, subject only to such precautions as are necessary for its own immediate protection, the hundreds of thousands of immigrants among whom every year are brought the seeds of pestilence and death to innocent communities, who now have only such protection as may be interposed at State boundaries—a protection which finds its logical expression in non-intercourse and “shot-gun” quarantines.

On this subject the ILLINOIS STATE BOARD OF HEALTH has taken the action shown in the following extract from the minutes of the regular annual meeting held in the city of Springfield on the 19th day of January, 1882:

WHEREAS, Quarantine measures for the prevention of the introduction of epidemic, contagious or infectious diseases from foreign countries into the United States are matters of National concern affecting not only the seaboard and Gulf States (where, necessarily, such measures must be enforced), but also and equally those of the interior—as evidenced most recently by the wide diffusion of imported small-pox; therefore, be it

*Resolved*, That in the judgment of this Board, such quarantine measures should be under the direct control of the National Government; the necessary rules and regulations formulated by a National organization; and their execution intrusted to officers clothed with National authority.

*Resolved*, That the Senators and Representatives in Congress of the State of Illinois be, and they hereby are, respectfully and earnestly requested to use their influence toward securing the necessary legislation to this end.

This action of the ILLINOIS BOARD has been presented to the U. S. Senate by Vice-President Davis, and has since been supplemented by a similar resolution of the Michigan State Board of Health, which, at a special meeting held at Ann Arbor, March 1, 1882, adopted the following:

Measures for the prevention of the introduction of diseases from foreign countries into the United States are of National importance, affecting not only the seaboard and Gulf States, but also States in the interior, as evidenced a few years since by the widespread disaster from yellow fever, and recently by the wide diffusion of imported small-pox; therefore,

*Resolved*, That, in the judgment of this Board, such measures should be continued by the National Board of Health, and be undertaken by the United States government, as will best and most effectually prevent the introduction of diseases into the United States.

*Resolved*, That our Senators and Representatives in Congress be, and they hereby are, respectfully and earnestly requested to use their influence toward securing any appropriate legislation which may be necessary to this end.



*Present Action Necessary:*

The resolution concerning the Harris Bill, continued the speaker, adopted by the COUNCIL, is in the same general direction; but while much may be hoped from that bill, should it become law and be efficiently enforced, it will not do, in view of the thousands of unprotected immigrants who are daily being landed on our shores, to await its passage and enforcement.

The circular-letter of April 3, which had been addressed to the members of the COUNCIL and others, outlined a plan promising speedy relief, which is imperative in the present emergency. For the purpose of bringing the matter formally before the COUNCIL, the Secretary read the letter referred to, and its appended circular note to railroad managers.\*

*The "New Quarantine System":*

Dr. Baker, referring to the proposed immigrant inspection, read some extracts from a paper on the "New Quarantine System," in which it was shown, by an illustration at Port Huron, how ports of arrival and transit are only indirectly concerned in the sanitary condition of immigrants. While a very large number of such persons enter the country through Port Huron—probably not much less than those arriving at New York—both the local danger at Port Huron and the general danger to the people of Michigan are inconsiderable. Infected passengers pass rapidly through the State, and, as a rule, it is only at Chicago and other distributing points, or at their final destinations, that they spread the disease. He also read the text of the requisition of the Michigan State Board upon the National Board, and an outline of suggested regulations concerning the duties of inspectors.

*Preliminary Action of the Council on the Subject:*

At the close of Dr. Baker's remarks, Dr. Mitchell moved that the resolutions of the Illinois and Michigan State Boards of Health, the correspondence between Dr. Chaillé and Gov. McNery, and the resolutions submitted by Dr. Thornton—all pertaining to the subject of the exclusion of yellow fever and to the River-Inspection Service in connection therewith—be referred to a special committee with instructions to report at the evening session. The motion being carried, the President appointed Dr. Henry B. Baker, Hon. David P. Hadden and Dr. Gustavus Devron, as said committee.

Dr. Rauch moved that the papers relative to maritime quarantine be referred to the same committee; and it was so ordered.

Dr. Mitchell moved that the papers referring to the subject of immigrant inspection be referred to a special committee, also to report at the evening session.

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\*For text of this letter and circular note, see pages 343-4, of this volume.



It was so ordered, and the President appointed as said committee Drs. John H. Rauch, G. B. Thornton, D. B. Hillis, J. H. Dibbell, Jr., and H. B. Baker.

Adjourned until 7:30 p. m.

At the evening session, Dr. Baker, for the committee on the River-Inspection Service, National Board of Health, and the exclusion of yellow fever from the Mississippi Valley, submitted a report, which, amended as follows, was unanimously adopted:

WHEREAS, The prevention of the introduction of yellow fever into the United States is a subject of National importance; and

WHEREAS, We believe that there is no safety if an infected vessel is allowed to enter the Mississippi river; therefore be it

*Resolved*, That in the opinion of this COUNCIL it is proper for the Louisiana Board of Health to ask, and it is the duty of the National Board of Health to continue to give, aid in the prevention of the introduction of yellow fever into the Mississippi Valley;

*Resolved*, That because of the duties of the National Board of Health in aiding the prevention of the introduction of yellow fever and in giving accurate information to all States interested in the sanitary condition of the Mississippi Valley, 1.) An inspector of the National Board of Health should be placed at Eadsport to act conjointly with the officer of the Louisiana State Board of Health in securing the exclusion of infected vessels from the Mississippi river, and in notifying such vessels that they must be thoroughly disinfected; 2.) That a representative of the National Board of Health should be stationed at the Mississippi-river quarantine station; 3.) That it is the duty of all health authorities in the Gulf States promptly to communicate to the National Board of Health any and all possible information relative to the occurrence of yellow fever, or of a case which may be suspected to be yellow fever, and in every possible way to aid the National Board of Health to perform its duties in giving accurate information for the guidance of State and other boards of health throughout this country.

*Resolved*, That this COUNCIL, duly appreciating the utility of an efficient inspection service during the summer months for the Mississippi river, and for railroads having their termini on the Gulf coast, and also the efficiency and moral effect of such service as was maintained by the National Board of Health during the past three summers, hereby respectfully request the National Board of Health to re-establish said inspection service in the Mississippi Valley for the approaching summer—that is to say until the middle of October.

*Resolved*, That the National Board of Health be requested to place on duty at New Orleans, and at such other southern ports as may be deemed necessary, an inspector or inspectors, whose duties shall be to supervise the shipment by river or rail of all goods, merchandise, baggage, etc., and to inspect persons when necessary, and to advise by telegram the secretary of each board of health whenever such goods or persons are believed to be infected or in anywise dangerous to the public health.

*Resolved*, That the Secretary of this COUNCIL be instructed to transmit to the Secretary of the National Board of Health a list of the health organizations forming this COUNCIL.

The committee also submitted the following preamble and resolutions concerning maritime quarantines, which were unanimously adopted:

#### *Action concerning Maritime Quarantines:*

WHEREAS, Measures for the prevention of the introduction of disease from foreign countries into the United States, are of National importance, affecting not only the seaboard and Gulf States, but also the interior, as evidenced a few years ago by the widespread disaster from yellow fever and recently by the wide diffusion of small-pox; and

WHEREAS, Hitherto the efforts of State and local health organizations have proved inadequate in giving needed protection;

*Resolved*, That, in the judgment of this COUNCIL, such measures should be taken by the National Government as will most effectually prevent the introduction of contagious and infectious diseases into the United States.

*Resolved*, That the work of the National Board of Health and its objects meet the cordial approval of this COUNCIL, which respectfully and urgently requests the Congress of the United States to make the necessary appropriation to enable the National Board of Health to continue its work.

### *Small-Pox Importation into Illinois:*

In presenting the report of the committee on the present prevalence of small-pox and the subject of an immigrant-inspection service, Dr. Rauch, its chairman, briefly recounted the importations of the disease into Illinois by unprotected immigrants during the past six months. He stated that out of 168 infected localities it had been ascertained that considerably over one-half were the result of direct importation either through Chicago, or immediately to the points where the disease first appeared. During the past two weeks no less than six separate infection-centres had been established by the passengers of one vessel, the Bremen steamer Hermann, via Baltimore, March 12th, and he had heard of cases in other States from the same vessel. It was simply a repetition of previous experience. For example, the epidemic of 1873 could be traced back to immigrants arriving in 1871. Previous to that year there had been little or no small-pox in Chicago since 1862. For some months previous to the great fire of 1871 there had not been a single case in the city; but about the middle of October of that year, some infected immigrants from the steamer Allemania arrived, among whom three cases at once developed, and from these sprang the epidemic which reached its height in 1872-3. The scattering cases which occurred during the winter of 1880-81, had early attracted his attention and led to the Small-Pox Conference held in Chicago in June, 1882. With the details of that Conference and the plans then proposed, the COUNCIL was familiar.

### *Immigrant-Inspection Service:*

It was now designed to carry into immediate operation a system of sanitary inspection and supervision of immigrants arriving in this country during the coming summer. The number would be unprecedented, and serious disaster was threatened if efficient steps were not taken to secure their vaccinal protection. The chances of Asiatic cholera were, of course, exceedingly remote; but, if that disease managed to elude the quarantines of the East, this inspection-service might be relied on to arrest its spread in the United States.

The plans for the service were in an encouraging state of forwardness. The ILLINOIS BOARD had already made its requisition upon the National Board. Dr. Baker had informed the Council that the Michigan Board had done the same, and Dr. Elisha Harris wrote that everything was in readiness in New York State to begin inspections at any time. The health authorities of Pittsburg, Cincinnati and Detroit, and the State Boards of Health of West Virginia, Indiana and Kentucky, had all advised him (the speaker) of their cordial assent and coöperation. The managing officers of leading trunk railroad lines had either written, or called upon him personally, to assure him of their earnest support of the measure, and proffered every facility in their power toward the successful carrying out of the details of the service.

### *Action of the Council on the proposed Service:*

He then briefly outlined these details, stating where the various inspection stations would be located, the proposed number of inspect-

ors, their authority and mode of operation, the provision for the care of those found infected in transit, in field hospitals, etc., the probable cost of the service, and other matters, and closed by offering, on behalf of the committee, the following report:

TO THE SANITARY COUNCIL, MISSISSIPPI VALLEY:

Your committee to whom was referred the subject of immigrant inspection, with reference to the prevention of the further importation of small-pox into the interior, respectfully recommends that such inspection be commenced on May 1st, prox., and that all the State and sanitary organizations interested should unite with the National Board of Health in order to accomplish the object desired.

JOHN H. RAUCH, *Chairman*.  
G. B. THORNTON,  
D. B. HILLIS,  
J. A. DIBRELL, Jr.,  
H. B. BAKER.

On motion of Dr. Farquaharson, the report was adopted, and the Secretary was instructed to forward copies of the same to the Secretary of the National Board of Health and to the various State and local health authorities interested.

*Disinfection of Clothing and Baggage:*

Dr. Baker submitted the following resolution, which was adopted:

*Resolved*, That this COUNCIL deems it important that clothing and baggage on board vessels and cars coming from places infected with small-pox, should be disinfected, even though, by reason of vaccination, no person on board such vessels or cars contract the disease.

*Effect of Inundations on Health:*

Upon motion of Dr. Mitchell, a committee was appointed to inquire what effect, if any, the recent inundation of the Mississippi river may have on the general health of the people of the Mississippi Valley, and to report at the next annual meeting.

The President appointed Drs. L. F. Salomon, G. B. Thornton, Thad. M. Stevens and R. J. Farquaharson as said committee.

*Election of Officers:*

The Council then went into an election of officers for the ensuing year, with the following result: For President, Dr. Gustavus Devron, of Louisiana; for Vice-President, Dr. D. B. Hillis, of Iowa; for Secretary and Treasurer, Dr. John H. Rauch, of Illinois.

Adjourned until 9 o'clock, Thursday a. m.

At the Thursday morning session, the Secretary read a communication from Dr. Wm. M. Clark, Secretary of the Tennessee State Board of Health, transmitting a preamble and resolutions adopted by said Board at its regular April meeting; and in which it was recited that the periodic overflows of the Mississippi river were not alone destructive to the material interests of the Valley, but highly injurious to health, and direct causes of, and incentives to, epidemic diseases; wherefore the Board petitions Congress to speedily inaugurate plans under the direction of the General Government, "which shall, when completed, effectually prevent the repetition of the sad experience of the past."

*Co-operation of Local Boards of Health:*

Dr. Baker moved that the Secretary be requested to invite the co-operation of the city boards of health of Cleveland and Toledo in the proposed Immigrant-Inspection Service; to which request Dr. Thornton moved that a special invitation be extended to the health officer of the State of Texas to co-operate in the work of this COUNCIL. Adopted.

*Sundry Resolutions Adopted:*

Dr. Salomon offered sundry resolutions, which were duly adopted, tendering the thanks of the COUNCIL to Dr. J. J. Speed, for the able manner in which he has presided at the meetings of this COUNCIL; to Dr. J. H. Rauch for his untiring efforts in promoting its welfare and extending its usefulness; to the railroad companies for facilities to the members; and to the management of the Cairo opera-house for its kindness in placing at the disposal of the COUNCIL the free use of that building.

On motion of Dr. Rauch, the members of the COUNCIL were requested to send copies of the resolutions adopted at the present meeting to the individual members of their respective Congressional delegations, and to urge them to advance and support the projects therein named.

On motion of Dr. Dibrell, the Executive Committee was authorized to call the next regular meeting of the COUNCIL at such time and place as, in its discretion, may seem necessary.

On motion of Dr. Baker, the COUNCIL adjourned to the Cairo opera-house, to listen to the address of the retiring President, upon the "Necessity of National Control of the Prevention of the Introduction of Yellow Fever and Small-Pox into the United States."

At the conclusion of the address Dr. Devron, president-elect, moved a vote of thanks to its author, Dr. John J. Speed, and the COUNCIL requested a copy for publication.

The Fourth Annual Meeting of the COUNCIL then adjourned *sine die*.

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# MORTALITY STATISTICS

AND

NOMENCLATURE OF DISEASES.

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# MORTALITY STATISTICS

AND

## NOMENCLATURE OF DISEASES.

DURING the year an effort has again been made to secure the returns of marriages, births and deaths, which Section 8 of the State Board of Health Act requires county clerks to render to the Secretary of the STATE BOARD OF HEALTH, annually, and at such other times as the BOARD may direct. Forms for these returns were prepared and distributed, together with the following instructions for compiling the Condensed Returns of Deaths:

ILLINOIS STATE BOARD OF HEALTH—No. 100.

### INSTRUCTIONS

FOR COMPILING THE

### CONDENSED RETURN OF DEATHS.

So many synonyms and equivalents are used by physicians to describe the same disease, that a blank which should contain all of them would be unwieldy and confusing.

In the blank prepared by the Secretary for the CONDENSED RETURN OF DEATHS, a list of 175 titles is given, duly classified, but numbered consecutively.

These numbers are the key to the proper compilation of the CONDENSED RETURN.

For convenience, this list of titles is reprinted herein in two forms—First, as it appears on the CONDENSED RETURN blank, with the consecutive numbers preceding the titles (see CLASSIFIED LIST OF CAUSES OF DEATH). Second, in alphabetical order, each title followed by the same number which it bears on the CONDENSED RETURN (see ALPHABETICAL LIST OF CAUSES OF DEATH).

To these two is added a LIST OF SYNONYMS AND EQUIVALENTS, also arranged alphabetically, and each title followed by the number of its corresponding title on the CONDENSED RETURN.

This LIST OF SYNONYMS has been compiled after examining the titles of *Causes of Death* in over 65,000 cases—including every death returned in one county during four and a-half years. The labor was undertaken, and the examination made, in order to become practically acquainted with the difficulties which a non-professional would encounter in attempting to tabulate and arrange returns made by nearly 6,000 physicians, of different schools, adhering to various systems of classification and nomenclature, and often using local or idiomatic terms in their certificates.

Even a medical man might be excused for not knowing that *angina maligna*, *angina membrana*, *croupous diphtheria*, *cynanche maligna*, *diphtheritic sore throat*, *malignant diphtheria*, *putrid fever*, *putrid sore throat*, *sloughing sore throat*—were all to be returned under the title DIPHTHERIA (No. 8); or that *bold hives*, *cynanche trachealis*, *laryngitis membranacea*, *diphtheritis trachealis* and GROUP (No. 93), are one and the same thing.

Clearly, then, it would be idle to expect a non-medical man to compile correct returns from *Certificates* assigning such a diversity of nominal causes of death. Hence this attempt to simplify the matter by the appended lists.

## INSTRUCTIONS.

It is recommended that the compiler first take the REGISTER OF DEATHS and enter in the first left-hand column in red ink the number of the title of the *Cause of Death* in each case—ascertaining this number by reference, first, to the *Alphabetical List*, and if the title be not found therein, then by reference to the LIST OF SYNONYMS.

Thus, the *Cause of Death* being given by the physician as *Enteric fever*, reference to the *Alphabetical List* shows *Enteric fever* to be numbered 12. Enter, therefore, the number 12 in red ink in the first left-hand column of the REGISTER record of such a case.

In another instance, the *Cause of Death* being given as *Typhoid fever*, and this title not being found in the *Alphabetical List*, the LIST OF SYNONYMS must be consulted, and there it will be found that *Typhoid fever* is also numbered 12, (it being a synonym for *Enteric fever*.) and the record of the case will, therefore, be red-ink numbered in like manner.

Having completed the numbering of the REGISTER in this manner, the next step will be to take one set of *Form 90*, and, by dots or strokes in the proper spaces opposite the number of the *Cause of Death*, check off from the REGISTER each item of *Form 90*.

The following illustrations may assist to a better understanding of the method. Only those entries in the REGISTER, which are necessary for the CONDENSED RETURN, are given in these illustrations. The full-faced figures in the first left-hand column represent the red-ink figures corresponding with the name of the cause of death on *Form 90*.



# REGISTER OF DEATHS.

No.	1. Name. 2. Sex and Color.	1. Age. 2. Occupation.	DATE OF DEATH.		Single, Married, Widower or Widow.	1. Nationality. 2. Where Born.	1. Place of Death. 2. Cause of Death.
			Month.	Year.			
"1." (Red Ink.) <b>1.</b>	1 2 Sex, "Male," Color, "White."	1 Year, "21." 2	"January."	"1881."	"Single."	1 2 "Illinois."	1 "Chicago." 2 "Small-pox."
"2." (Red Ink.) <b>50.</b>	1 2 Sex, "Female," Color, "White."	1 Year, "17." 2	"May."	"1881."	"Single."	1 2 "New York."	1 "Jefferson." 2 "Phtthisis."
"3." (Red Ink.) <b>50.</b>	1 2 Sex, "Male," Color, "Black."	1 Year, "40." 2	"March."		"Married."	1 2 (No entry.)	1 "Near Palatine." 2 "Consumption."
"4." (Red Ink.) <b>15.</b>	1 2 Sex, "Female," Color, "White."	1 Year, "1." 2	"July."	"1881."	(No entry)	1 2 "Cook County"	1 "Hyde Park." 2 "Summer complaint."
"5." (Red Ink.) <b>160.</b>	1 2 Sex, "Male," Color, "White."	1 Year, "33." 2	"December"	"1881."	"Married."	1 2 "Ireland."	1 "Grand Crossing." 2 "Crushed by the engine of a freight train."
"6." (Red Ink.) <b>134.</b>	1 2 Sex, "Male," Color, "Yellow."	1 Year, "65." 2	"February."	"1881."	"Widower."	1 2 "Tennessee."	1 "Lake View." 2 "Congestion of kidneys."

# CONDENSED RETURN OF DEATHS.

In tabulating the preceding cases on this CONDENSED RETURN, FORM 90, a dot or stroke (representing one case) should be made in each space under the following headings for each of the respective cases.

CAUSES OF DEATH.	SEX.	COLOR.	NATIONALITY.	SOCIAL CONDITION.	LOCALITY.	AGE.	MONTH.
<b>1.</b> Small-pox.	Male.	White.	Illinois.	Single.	Cities or towns over 5,000 population.	20-30 years.	January.
<b>50.</b> Phthisis.	Female.	White.	United States.	Single.	Towns under 5,000, over 500 population.	15-20 years.	May.
<b>50.</b> Phthisis.	Male.	Colored.	Not stated.	Married.	Towns or villages under 500 pop., or in country.	40-50 years.	March.
<b>15.</b> Cholera infantum.	Female.	White.	Illinois.	Not stated.	Cities or towns over 5,000 population.	Between 1 and 5 years.	July.
<b>160.</b> Railroad accident.	Male.	White.	Foreign.	Married.	Towns under 5,000, over 500 population.	30-40 years.	December.
<b>134.</b> Other diseases urinary system.	Male.	Colored.	United States.	Widower.	Towns under 5,000, over 500 population.	60-70 years.	February.

After the entries are all made in the above manner on Form 90, the dots or lines in each are to be added up, and the totals placed in the corresponding spaces on the other set of Form 90, which are then to be mailed to the Secretary at Springfield.

Additional copies of the Form may be obtained from the Secretary.

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Form 90 will be used only for tabulating the deaths in the year ended December 31, 1881.

It is desired, however, that the enclosed blank (S. B. H. No. 101) be filled out and returned with Form 90.

It is hoped that this matter may receive prompt attention, and the returns be made to the STATE BOARD at as early a date as possible, in order that any changes found to be desirable in future forms may be made in due season.

JOHN H. RAUCH, M. D.,

*Secretary.*

SPRINGFIELD, ILL., July, 1882.

# CLASSIFIED LIST OF CAUSES OF DEATH,

OR

## NOMENCLATURE OF DISEASES.

### I.--Specific, Febrile or Zymotic Diseases.

#### A.—MIASMATIC DISEASES.

1. Small-pox.
2. Varioloid.
3. Measles.
4. Scarlet fever.
5. Typhus fever.
6. Influenza.
7. Mumps.
8. Diphtheria.
9. Cerebro-spinal fever.
10. Whooping-cough.
11. Continued fever.
12. Enteric fever.
13. Yellow fever.
14. Other miasmatic diseases.

#### B.—DIARRHETIC DISEASES.

15. Cholera infantum.
16. Cholera morbus.
17. Winter cholera.
18. Diarrhea.
19. Dysentery.

#### C.—MALARIAL DISEASES.

20. Intermittent fever.
21. Remittent fever.
22. Continuous fever.
23. Other malarial diseases.

#### D.—ZOÖGENOUS DISEASES.

24. Hydrophobia.
25. Other zoögenous diseases.

#### E.—VENEREAL DISEASES.

26. Syphilis.
27. Other venereal diseases.

#### F.—SEPTIC DISEASES.

28. Phagedena.
29. Erysipelas.
30. Pyemia.
31. Septicemia.
32. Puerperal fever.

### II.--Parasitic Diseases.

33. Thrush.
34. Hydatids.
35. Worms.
36. Trichiniasis.
37. Other parasitic diseases.

### III.--Dietic Diseases.

38. Starvation.
39. Scurvy.
40. Alcoholism.
41. Delirium tremens.

### IV.--Constitutional Diseases.

42. Rheumatic fever.
43. Rheumatic heart.
44. Rheumatism.
45. Gout.
46. Rickets.
47. Cancer.
48. Tabes mesenterica.
49. Tubercular meningitis.
50. Phthisis.
51. Scrofula.
52. Purpura.
53. Anemia.
54. Diabetes mellitus.
55. Other constitutional diseases.

### V.--Developmental Diseases.

56. Premature birth.
57. Atelectasis.
58. Cyanosis.
59. Spina bifida.
60. Other congenital defects.
61. Umbilical hemorrhage.
62. Old age.

### VI.--Local Diseases.

#### A.—NERVOUS SYSTEM.

63. Inflammation of brain.
64. Apoplexy.
65. Softening of brain.
66. Hydrocephalus, not acute.
67. Hemiplegia.
68. Paralysis agitans.
69. General paralysis of insane.
70. Paraplegia.
71. Chorea.
72. Epilepsy.
73. Convulsions.
74. Trismus nascentium.
75. Tetanus.
76. Diseases of spinal cord.
77. Other diseases, nervous system.

#### B.—ORGANS OF SPECIAL SENSE.

78. Epistaxis.
79. Other diseases, nose, ear and eye.

#### C.—CIRCULATORY SYSTEM.

80. Endocarditis.
81. Pericarditis.
82. Hypertrophy of heart.
83. Angina pectoris.
84. Valve-disease of heart.
85. Syncope.
86. Aneurism.
87. Senile gangrene.
88. Embolism.
89. Phlebitis.



- 90. Varicose veins.
- 91. Other diseases, circulatory system.

#### D.—RESPIRATORY SYSTEM.

- 92. Laryngitis.
- 93. Croup.
- 94. Other diseases, larynx and trachea.
- 95. Emphysema.
- 96. Asthma.
- 97. Bronchitis.
- 98. Pneumonia.
- 99. Typhoid pneumonia.
- 100. Pleurisy.
- 101. Other diseases, respiratory system.

#### E.—DIGESTIVE ORGANS.

- 102. Stomatitis.
- 103. Dentition.
- 104. Sore throat.
- 105. Dyspepsia.
- 106. Hematemesis.
- 107. Melana.
- 108. Disease of stomach.
- 109. Enteritis.
- 110. Ulceration of intestines.
- 111. Ileus.
- 112. Stricture and strangulation of intestines.
- 113. Intussusception.
- 114. Hernia.
- 115. Fistula.
- 116. Peritonitis.
- 117. Ascites.
- 118. Gallstones.
- 119. Jaundice.
- 120. Cirrhosis.
- 121. Other diseases of liver.
- 122. Other diseases, digestive system.

#### F.—LYMPHATIC SYSTEM.

- 123. Disease of lymphatics.
- 124. Disease of spleen.

#### G.—GLAND-LIKE ORGANS OF UNCERTAIN USE.

- 125. Bronchocele.
- 126. Addison's disease.

#### H.—URINARY SYSTEM.

- 127. Nephritis.
- 128. Bright's disease.
- 129. Uremia.
- 130. Suppression of urine.
- 131. Calculus.
- 132. Hematuria.
- 133. Disease of bladder and prostate.
- 134. Other diseases, urinary system.

#### I.—REPRODUCTIVE SYSTEM.

##### a. Organs of Generation.

- 135. Ovarian disease.
- 136. Disease of uterus and vagina.
- 137. Disorders of menstruation.
- 138. Pelvic abscess.
- 139. Perineal abscess.
- 140. Disease of testes, penis, &c.

##### b. Parturition.

- 141. Abortion.
- 142. Miscarriage.
- 143. Puerperal mania.
- 144. Puerperal convulsions.
- 145. Placenta previa.
- 146. Flooding.
- 147. Plegmasia dolens.
- 148. Other complications of childbirth.

#### K.—LOCOMOTOR SYSTEM.

- 149. Caries and necrosis.
- 150. Arthritis.
- 151. Ostitis.
- 152. Other diseases, locomotor system.

#### L.—INTEGUMENTARY SYSTEM.

- 153. Carbuncle.
- 154. Phlegmon.
- 155. Lupus.
- 156. Ulcer.
- 157. Eczema.
- 158. Pemphigus.
- 159. Other diseases, integumentary system.

#### VII—Violence.

- 160. Railroad accident.
- 161. Other accident.
- 162. Homicide.
- 163. Suicide.
- 164. Execution.

#### VIII—Otherwise Unclassified.

- 165. Dropsy.
- 166. Debility.
- 167. Atrophy from inanition.
- 168. Mortification.
- 169. Tumor.
- 170. Abscess.
- 171. Hemorrhage.
- 172. Sun-stroke.
- 173. Sudden—cause not stated.
- 174. Ill-defined.
- 175. Unknown.

# ALPHABETICAL LIST

## OF

# CAUSES OF DEATH.

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THE number following the title is the same as that on Form 90, and shows where to look for the title on the Form.

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|--|--|
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## MORTALITY STATISTICS.

RETURNS of Deaths for 1881 have been received from many of the counties, and are now being tabulated. Meanwhile the following Mortality Statistics for Illinois, for the Census Year, 1880, furnished in advance sheets from the Census Office, are here presented as forming an appropriate starting-point for a continuous series of Vital Statistics of the State.

Surgeon John S. Billings, U. S. A., under whose direction the Mortality Statistics of the Tenth Census were compiled, remarks that the death-rate in the United States, 15.1 to the thousand for the census year 1880, is decidedly higher than that given in the census of 1860, viz: 12.6, and of 1870, viz: 12.8 per thousand; but that this does not indicate any actual increase in the number of deaths as compared with the living population. It shows, rather, that the efforts made in the census of 1880 to obtain more complete returns of deaths, than had been collected in previous enumerations, had been to some extent successful.

There is still a deficiency, however, ascertained to be as great in some instances as 30 per cent., in the returns of the enumerators, the result of which, if taken into account, will be an average mortality, for the whole country, of 18.2 per thousand of living population per annum. The actual mortality for the whole country during the census year was not less than 17, nor greater than 19 per thousand. This rate compares favorably with that of all civilized countries. The death-rate in the rural population of England, comprising ten and one-half millions of people in the year 1880, was 18.5 per thousand. For the whole of England for the same year, it was 20.5 per thousand. For Scotland, in 1878, it was 21.3 per thousand; in the mainland rural group of Scotland for the same period it was 17.3 per thousand. The low death-rate in this country is considered to be due to the comparative absence of overcrowding and to the more general and equable distribution of the means of supporting life, including especially the abundant food-supply of good quality for all classes of people.

Concerning the causes of death, as returned by the enumerators, Dr. Billings observes that they have been obtained much more accurately than in any preceding census, owing to the very general aid and coöperation of the physicians of the country in revising and correcting the enumerators' returns with reference to this point. The following summary of some of the more important causes of death is appended, as of general interest.

*Diphtheria*.—The number of cases of deaths reported as due to diphtheria is: Males, 18,849; females, 19,549; total, 38,398; giving a proportion of 52.32 per thousand of all deaths in which the causes are reported. The total number of deaths from diphtheria under one year of age was 2,893; under five years of age, 20,035; between five and fifteen years of age, 16,162.

In the North Atlantic region, the proportion of deaths from diphtheria to the total number of deaths having recorded causes was 51.29 per thousand, being in the cities (New Haven, Boston, Cambridge, Fall River, Lawrence, Lowell, Lynn, and Providence,) 46.71 per thousand, and in the remainder of the group, including the smaller towns and rural districts, 53.80 per thousand.

In the Gulf coast region the proportion of deaths from diphtheria was 12.16 per thousand, being in the city of New Orleans 13.74 and in the remainder of the group, 12.27 per thousand.

In the Lake region the proportion of deaths from diphtheria was 81.15 per thousand of all deaths reported, being in the cities (Chicago, Milwaukee, Detroit, Cleveland, Buffalo, Rochester and Toledo,) 78.15, and in the remainder of the group, 84.10 per thousand.

*Enteric Fever*.—The total number of deaths from enteric (typhoid) fever reported is: Males, 11,852; females, 11,053; total, 22,905; being in the proportion of 31.21 per thousand of all deaths having reported causes. The total number of deaths from this disease under one year of age was 654; under five years, 2,707; from five to fifteen years, 3,952; from fifteen to sixty years, 13,945; over sixty years of age, 2,248.

In the North Atlantic region the proportion of deaths from enteric fever to the total number of deaths having recorded causes was 18.64 per thousand, being in the larger cities (for list of which see above) 13.26, and in the smaller towns and rural districts, 19.95 per thousand.

In the Gulf coast region the proportion of deaths from this disease was 22.01 per thousand, being in the city of New Orleans 7.67, and in the remaining portion of the group, 30.02 per thousand.

In the Lake region the proportion of deaths from this disease was 22.28 per thousand of all deaths reported, being in the large cities, 17.16, and in the remainder of the group, 27.31 per thousand.

It will be seen from these figures that neither diphtheria nor enteric fever are especially diseases of the large cities. They appear to be more prevalent in the small towns and rural districts which have no general water-supply or systems of sewerage, but obtain their water from springs and wells, and observe the usual custom of storing excreta in cesspools or vaults.

*Malarial Fevers*.—The total number of deaths reported as due to malarial fevers is: Males, 10,276; females, 9,985; total, 20,261; giving a proportion of 27.61 per thousand of all deaths from reported causes. The total number of deaths from these fevers under one year of age was 2,002; under five years, 6,182; from five to fifteen years, 3,482; from fifteen to sixty years, 7,909; sixty years and over, 2,623.



In the North Atlantic region the proportion of deaths from malarial fever to all deaths recorded was 4.56 per thousand, being in the cities 3.02 and in the remainder of the group 5.40 per thousand.

In the Gulf coast region the proportion of deaths from this disease was 65.85 per thousand, being in the city of New Orleans 44.81, and in the remaining portion of the group, 77.61 per thousand.

In the Lake region the proportion of deaths from these fevers was 9.74 per thousand, being for the large cities 8.27 and for the remainder of the group, 11.18 per thousand.

*Consumption.*—This is the cause of death to which the greatest number of cases are referred in the records, there being reported 40,619 males and 50,932 females as dying of this disease, giving a proportion of 124.75 per thousand of all deaths having reported causes, or a little over 12 per cent. Taking the same groups used above, we find in the North Atlantic region, in the cities, consumption caused 150.55 per thousand of all cases of reported deaths, and in the remainder of the group 172.77 per thousand, giving an average of 164.89 per thousand.

In the Gulf coast region it caused in New Orleans 152.11 per thousand, and in the remainder of the group 97.66 per thousand, the average being 117.18 per thousand.

In the Lake region it caused in the cities 97.66, and in the rural districts 130.22 per thousand, giving an average of 114.08 per thousand.

It will be seen from these figures that in the North Atlantic and Lake regions the mortality from consumption is highest in the small towns and rural districts, while on the Gulf coast the mortality is greatest in the city of New Orleans, in which it is higher than in the northern cities. This is probably due to the fact that New Orleans is not sewered or drained as are the northern cities, and has the soil-water very near the surface.

In the following tables Illinois is divided, by the Census Office, into three sections or groups of counties, to-wit:

GROUP 1.

Cook,

Lake,

GROUP 2.

Adams,  
Alexander,  
Calhoun,  
Carroll,  
Gallatin,  
Hancock,

Hardin,  
Henderson,  
Jackson,  
Jersey,  
Jo Daviess,  
Johnson,

Madison,  
Massac,  
Mercer,  
Monroe,  
Pike,  
Pope,

Pulaski,  
Randolph,  
Rock Island,  
Saint Clair,  
Union,  
Whiteside,

GROUP 3.

Bond,  
Boone,  
Brown,  
Bureau,

Effingham,  
Fayette,  
Ford,  
Franklin,

Livingston,  
Logan,  
Macon,  
Macoupin,

Richland,  
Saline,  
Sangamon,  
Schuyler,

Cass,  
 Champaign,  
 Christian,  
 Clark,  
 Clay,  
 Clinton,  
 Coles,  
 Crawford,  
 Cumberland,  
 DeKalb,  
 DeWitt,  
 Douglas,  
 Du Page,  
 Edgar,  
 Edwards,

Fulton,  
 Greene,  
 Grundy,  
 Hamilton,  
 Henry,  
 Iroquois,  
 Jasper,  
 Jefferson,  
 Kane,  
 Kankakee,  
 Kendall,  
 Knox,  
 La Salle,  
 Lawrence,  
 Lee,

Marion,  
 Marshall,  
 Mason,  
 Menard,  
 Montgomery,  
 Morgan,  
 Moultrie,  
 McDonough,  
 McHenry,  
 McLean,  
 Ogle,  
 Peoria,  
 Perry,  
 Piatt,  
 Putnam,

Scott,  
 Shelby,  
 Stark,  
 Stephenson,  
 Tazewell,  
 Vermilion,  
 Wabash,  
 Warren,  
 Washington,  
 Wayne,  
 White,  
 Will,  
 Williamson,  
 Winnebago,  
 Woodford.

# STATISTICS OF MORTALITY.

TABLE I.—Deaths in Illinois, in 1880, by Groups of Counties, Age and Sex, and Specified Disease.—Group 1.  
(Exclusive of Chicago.)

Cause of Death.	Under 1....					5 to 10.....					15 to 20.....					20 to 25.....					25 to 30.....					30 to 35.....					35 to 40.....					40 to 45.....					45 to 50.....					50 to 55.....					55 to 60.....					60 to 65.....					65 to 70.....					70 to 75.....					75 to 80.....					80 to 85.....					85 to 90.....					90 to 95.....					95 and over					Unknown.				
	1.	2.	3.	4.	Total under 5	5 to 10.....	15 to 20.....	20 to 25.....	25 to 30.....	30 to 35.....	35 to 40.....	40 to 45.....	45 to 50.....	50 to 55.....	55 to 60.....	60 to 65.....	65 to 70.....	70 to 75.....	75 to 80.....	80 to 85.....	85 to 90.....	90 to 95.....	95 and over	Unknown.																																																																												
GRAND TOTAL.....	93	209	64	30	28	28	359	72	38	31	51	37	41	48	27	35	33	33	34	33	40	28	23	13	2	1																																																																										
Total: Males.....	539	111	33	17	18	12	191	43	17	17	27	20	19	21	12	24	21	28	26	27	16	11	5	...	...																																																																											
Total: Females.....	444	98	31	13	10	16	168	29	21	14	27	17	22	24	15	12	12	6	13	13	12	8	2	1																																																																												
Unknown causes.																																																																																																				
Total.....	26	10	3	2	...	...	15	...	1	1	...	...	1	1	1	1	2	2	1	...	...	...	...	...																																																																												
Males.....	13	6	2	...	...	...	8	...	...	...	...	...	1	1	1	...	...	...	1	...	...	...	...	...																																																																												
Females.....	13	4	1	2	...	...	7	...	1	1	...	...	...	...	...	...	2	1	...	...	...	...	...	...																																																																												
I.—GENERAL DISEASES.																																																																																																				
General Diseases—A.																																																																																																				
Total.....	328	87	33	15	19	170	53	27	5	16	9	7	8	5	5	3	3	...	7	3	1	1	...	...																																																																												
Males.....	170	44	17	11	7	11	99	27	10	4	9	3	4	2	1	2	4	3	2	6	1	1	1	...																																																																												
Females.....	158	43	16	5	8	8	80	26	17	1	7	6	3	6	4	3	1	...	1	2	...	...	...																																																																													
1. Small-pox.....	M. 1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...																																																																												
F. 1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...																																																																												
2. Measles.....	M. 5	1	2	...	...	...	3	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...																																																																												
F. 8	...	...	3	1	...	...	4	1	1	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...																																																																												
3. Scarlet fever.....	M. 12	...	3	2	4	9	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...																																																																												
F. 14	...	...	2	2	3	7	4	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...																																																																												
4. Diphtheria.....	M. 52	5	6	6	3	7	27	18	4	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...																																																																												
F. 48	...	2	2	3	4	4	15	18	13	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...																																																																												
5. Whooping-cough.....	M. 3	2	...	1	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...																																																																												
F. 5	...	3	1	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...																																																																												

\* For names of Counties composing Group I, see ante, page 549.

TABLE I.—Deaths in Illinois: Group 1—Continued.

Cause of Death.	Total.....	Under 1....	1.	2.	3.	4.	Total under 5.....	5 to 10.....	10 to 15....	15 to 20....	20 to 25....	25 to 30....	30 to 35....	35 to 40....	40 to 45....	45 to 50....	50 to 55....	55 to 60....	60 to 65....	65 to 70....	70 to 75....	75 to 80....	80 to 85....	85 to 90....	90 to 95....	95 and over	Unknown..
6. Fever.....	M. F. 1	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7. Cerebro-spinal fever.....	M. F. 1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
8. Enteric fever.....	M. F. 19 7	.....	.....	.....	1	.....	1	1 1	3 1	1 1	6 1	1 2	2 1	1 1	.....	.....	.....	2	.....	.....	.....	1	.....	.....	.....	.....	.....
9. Diarrhea.....	M. F. 13 13	6 5	2 1	2 1	.....	.....	9 5	1	.....	.....	.....	1 1	1 2	1 1	1 1	1 1	1 1	1 1	.....	.....	.....	1	.....	.....	.....	.....	.....
10. Dysentery.....	M. F. 9 7	2 6	1 .....	.....	.....	.....	3 6	.....	.....	.....	.....	.....	.....	.....	.....	.....	1 1	2	.....	.....	.....	1	.....	.....	.....	.....	.....
11. Enteritis.....	M. F. 13 6	3 2	1 1	.....	1	.....	5 3	3 1	3 1	1 .....	1 .....	1 .....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
12. Cholera morbus.....	M. F. 2 1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
13. Cholera infantum.....	M. F. 27 31	22 26	5 5	.....	.....	.....	27 31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
14. Malarial fever.....	M. F. 6 2	1 .....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	1	.....	.....	1	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....
15. Erysipelas.....	M. F. 2 1	1 1	.....	.....	.....	.....	1 1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
16. Septicemia.....	M. F. 1 3	1 .....	.....	.....	.....	.....	1 1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
17. Puerperal septicemia.....	F. 9	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	1	1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18. Venereal diseases.....	M. F. .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
19. Others of this group.....	M. F. 4 1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....

















VIII.—AFFECTIONS CONNECTED  
WITH PREGNANCY.

[illegible]

X.—DISEASES OF THE SKIN AND  
CELLULAR TISSUE.









[illegible]





4. Debility.....	M.	78	48	2	1																							
	F.	67	45	3	3			51																				
5. Old age.....	M.	48																										
	F.	66																										
6. Atrophy.....	M.	1	1																									
	F.																											
<i>General Diseases—D.</i>																												
Total.....		1,373	62	24	10	5	10	111	33	36	88	159	131	109	105	108	94	85	70	71	56	44	30	20	8	4	1	2
Males.....		651	31	11	6	4	3	55	22	13	31	67	49	38	43	54	43	46	38	39	39	31	21	10	3	2	10	
Females.....		719	31	13	4	1	7	56	11	23	57	92	82	71	62	54	51	39	32	32	17	13	9	10	5	2	1	
1. Rheumatism.....	M.	15	1				2	1	2	2	1	1	1	2	1	1	1	2		2	2	1	1	2				
	F.	19						2																				
2. Scrofula and tubercles.....	M.	18	4	1	1	1		7	3	2	1	1	1	1	1	1	1		1									
	F.	17	5	4	1			10	2	2	1	2																
3. Leprosy.....	M.																											
	F.																											
4. Consumption.....	M.	421	13	7	3			23	6	1	23	58	44	29	33	40	33	31	21	24	22	15	8	1	1	1		
	F.	496	14	5	1		1	21	7	13	54	86	68	54	50	34	33	19	18	14	9	5	5	4	2			
5. Hydrocephalus.....	M.	14	9	2	1		1	12	1					1			1											
	F.	18	11	3	1		1	16																				
6. Cancer.....	M.	67	1		1			2			1		1	2	3	3	3	9	8	3	11	6	7	3		3		
	F.	75			1			1					6	7	10	11	12	8	11	1	2	3	1		1			
7. Tumor.....	M.	10	2					2	1	1		2	1	1	1	1	2	1	2	1	1	1	1					
	F.	13	1					1						1	1	1	1	1	1	1	1	1	1					
8. Anemia.....	M.	5	1					1	1	1	1	1	3	2			1	1	1				1	1				
	F.	10																										
9. Dropsy.....	M.	87	1	1	1	2		5	8	4	2	5	3	4	4	7	4	5	6	7	3	9	5	4	1	1		
	F.	67			1	3		5	2	5	2	2	6	5	3	6	3	5	6	5	4	4		2	1	1		
10. Glycosuria.....	M.	18				1	1	1	1	4	2	2		1	1	2		1		1	1			1				
	F.	3																										
11. Others of this group.....	M.	1			1			1								1												
	F.	1																										
12. Others of this class.....	M.																											
	F.																											



### III.—DISEASES OF THE CIRCULATORY SYSTEM.

Total	252	21	1	4	1	1	28	5	8	11	11	9	7	12	15	19	21	18	21	28	10	14	6	4	1	4
Males	131	13	1	3	1	1	18	3	4	3	7	2	4	4	4	8	12	12	8	17	6	8	5	1	1	4
Females	121	8	1	1	1	1	10	2	4	8	1	7	3	8	11	11	9	6	13	11	4	6	1	3	1	4
1. Angina pectoris	M. F.	1 4	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
2. Aneurism	M. F.	2 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
3. Diseases of the heart	M. F.	116 109	6 4	3 1	3 1	1 1	10 6	3 2	4 4	3 8	7 4	1 6	4 3	4 7	3 9	8 11	11 7	11 6	8 13	17 10	6 4	6 6	5 1	2 2	1 1	4 4
4. Others of this group	M. F.	12 7	7 4	1 1	1 1	1 1	8 4	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	2 2	1 1	1 1	1 1	2 1	1 1	1 1	1 1	1 1	1 1

### IV.—DISEASES OF THE RESPIRATORY SYSTEM.

Total	1,602	253	128	84	52	33	550	69	43	92	85	67	67	68	80	66	66	74	73	86	52	37	16	12	3	6
Males	889	131	72	46	30	11	293	35	19	51	55	38	31	32	31	46	45	45	47	48	24	28	8	2	1	4
Females	713	122	56	38	22	19	257	34	24	31	30	29	33	36	46	20	21	29	26	38	28	9	8	10	2	2
1. Croup	M. 132	61	16	20	16	8	121	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F. 121	48	20	17	15	10	10	110	10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2. Laryngitis	M. 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F. 2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3. Bronchitis	M. 62	12	10	3	2	1	28	1	1	1	2	1	1	1	1	1	7	1	5	6	2	3	1	1	1	1
F. 43	13	2	4	1	1	1	20	1	1	1	1	3	2	2	2	1	1	1	2	1	3	1	1	1	1	1
4. Pneumonia	M. 608	47	45	21	11	5	129	25	17	46	46	31	32	31	31	36	33	36	33	36	15	20	5	2	1	4
F. 489	50	31	16	5	8	8	119	19	21	28	26	25	27	33	40	17	18	26	21	35	21	7	6	1	1	1
5. Pleurisy	M. 10	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	1	1	1	1	2	1	1	1	1	1
F. 9	9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6. Asthma	M. 13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	3	1	2	2	1	1	1	1	1
F. 8	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7. Others of this group	M. 63	11	1	2	1	1	15	2	1	2	4	5	1	1	2	7	2	6	5	5	3	3	1	1	1	1
F. 41	11	1	1	1	1	1	15	2	1	1	2	4	1	1	3	1	2	2	2	1	2	1	1	1	1	1

TABLE II.—Deaths in Illinois: Group 2—Continued.

Cause of Death.	Under 1....							1. 2. 3. 4.							Total under 5.....	Unknown..
	Total .....	1.	2.	3.	4.											
V.—DISEASES OF THE DIGESTIVE SYSTEM.																
Totals .....	418	120	41	12	6	3	182									
Males .....	241	69	22	10	5	...	106									
Females .....	177	51	19	2	1	3	76									
1. Dentition .....	25	13	8	4	2	...	25									
M. F.	18	5	16	2	...	...	17									
2. Angina .....	15	6	3	1	1	...	11									
M. F.	4	2	...	...	1	...	3									
3. Gastritis .....	13	...	1	...	...	...	1									
M. F.	13	4	2	...	...	...	6									
4. Other diseases of the stomach .....	35	2	1	1	1	...	5									
M. F.	37	6	1	...	...	3	10									
5. Obstruction of the bowels .....	14	2	...	1	...	...	3									
M. F.	7	1	...	...	...	...	1									
6. Hernia .....	7	1	...	...	...	...	1									
M. F.	6	4	...	...	...	...	4									
7. Other diseases of the bowels .....	11	6	1	...	...	...	7									
M. F.	2	...	...	...	...	...	...									
8. Jaundice .....	6	...	1	...	...	...	1									
M. F.	5	2	...	...	...	...	2									
9. Inflammation and abscess of the liver .....	19	2	1	...	...	...	3									
M. F.	13	...	...	...	...	...	...									
10. Other diseases of the liver .....	21	...	1	...	...	...	1									
M. F.	13	...	...	...	...	...	1									
11. Peritonitis .....	10	2	1	...	...	...	3									
M. F.	18	...	...	...	...	...	...									













## STATISTICS OF MORTALITY.

TABLE III.—Deaths in Illinois in 1880, by Groups of Counties, Age and Sex, and Specified Disease.—Group 3.\*

Cause of Death.	Under 1					Total	Age and Sex											Unknown...								
	1.	2.	3.	4.	5.		5	10	15	20	25	30	35	40	45	50	55		60	65	70	75	80	85	90	95 and over.
GRAND TOTAL.....	2198	528	242	107	73	487	9925																			
Total: Males.....	12919	2817	1319	581	373	260	5383																			
Females.....	11999	2421	1023	513	358	227	4512																			
Unknown causes.																										
Total.....	1383	771	159	48	19	8	1005																			
Males.....	728	408	88	28	12	5	541																			
Females.....	655	363	71	20	7	3	464																			
I.—GENERAL DISEASES.																										
General Diseases—A.																										
Total.....	7377	1419	1140	576	377	270	3812																			
Males.....	3640	760	616	309	194	135	2011																			
Females.....	3737	659	521	267	183	135	1798																			
1. Small-pox.....	M. 14	2	2	1	1	1	7																			
F. 13	2	1	2	1	1	6																				
2. Measles.....	M. 185	41	45	21	14	9	130																			
F. 196	37	36	23	13	7	116																				

\*For names of Counties composing Group 3, see ante, page 519.



[illegible]

*General Diseases—B.*

[illegible]

General Diseases—C.

[illegible]

TABLE III.—Deaths in Illinois: Group 3—Continued.

Cause of Death.	Age Group										Unknown..
	Total.....	Under 1	1.	2.	3.	4.	Total under 5.....	5 to 10.....	10 to 15.....	15 to 20.....	
3. Malformation.....	M. 19	19					19				
	F. 13	13					13				
4. Debility.....	M. 123	38	20	1			59	1			1
	F. 111	46	1				47	1			2
5. Old age.....	M. 174										9
	F. 196										8
6. Atrophy.....	M. 1						1				
	F. 1										
<i>General Diseases—D.</i>											
Total.....	4032	188	88	57	23	14	370	74	94	309	16
Males.....	1805	86	48	34	11	5	184	40	25	102	8
	2227	102	40	23	12	9	186	34	69	207	8
Females.....	70	1					1	7	6	5	
	61	3	1		1	1	6	5	7	3	
1. Rheumatism.....	M. 71	17	10	12	1	1	41	7	1	3	
	F. 82	25	7	4	3	1	40	2	4	6	
2. Scrofula and tubercles.....	M. 1										
	F. 1										
3. Leprosy.....	M. 1										
	F. 1										
4. Consumption.....	M. 1233	43	23	15	6	2	89	11	12	87	7
	F. 1562	46	21	8	5	3	83	13	37	180	7
5. Hydrocephalus.....	M. 21	11	5	1			17	1	1		
	F. 24	14	4		1		19	2	1		
6. Cancer.....	M. 139		1	1			2				
	F. 191	1	3				4				
7. Tumor.....	M. 25	2	3				6	1	1	1	
	F. 45	5					5	1	1	1	



[illegible]

## II.—DISEASES OF THE NERVOUS SYSTEM.

Total	2663	672	357	111	86	48	1274	141	77	75	80	51	79	65	53	67	67	86	113	96	97	105	50	23	8	....	10
Males	1441	370	218	59	47	25	719	70	43	39	43	34	29	31	24	40	38	46	72	49	58	57	21	16	4	....	11
Females	1162	302	139	52	39	23	555	71	34	36	37	20	30	34	29	27	29	40	41	47	39	48	29	7	4	....	5
1. Inflammation of the brain.	M. 336 F. 255	101 85	53 53	18 24	8 11	5 5	248 181	36 24	11 8	5 10	7 8	5 2	5 3	3 3	2 2	4 3	4 1	7 1	4 2	4 1	4 1	2 1	2 2	4	....	3	
2. Meningitis	M. 98 F. 99	31 21	25 18	3 7	4 7	3 3	70 59	6 14	5 5	3 4	3 6	3 2	3 2	2 2	2 1	....	....	2	2	....	....	1	....	....	....	1	
3. Apoplexy	M. 85 F. 72	2 1	2 1	1 1	1 1	1 1	6 1	....	....	1 1	1 3	1 4	1 10	4 2	3 2	3 2	7 6	7 8	15 5	9 8	10 9	10 7	2 3	3 5	2	....	
4. Paralysis	M. 209 F. 188	2 5	....	3 1	....	....	5 6	....	....	1 5	4 3	4 1	6 2	7 ....	3 3	15 9	16 15	11 13	27 21	27 25	32 33	28 32	12 17	11 6	4	....	
5. Tetanus and trismus nascentium	M. 30 F. 9	10 4	....	....	1	....	11 5	2 2	1 1	2 1	3 5	4 ....	3 ....	....	....	1	....	2	1	....	....	....	....	....	....	....	
6. Epilepsy	M. 50 F. 35	12 4	....	....	....	....	12 7	2 1	2 1	6 2	6 4	2 4	5 4	5 5	3 2	1	2	3	1	2	....	1	....	....	....	1	
7. Convulsions	M. 288 F. 195	132 120	64 35	11 7	3 8	3 1	215 171	7 3	1 3	2 1	3 1	3 3	3 2	1 ....	....	....	1	1	2	....	1	....	....	....	....	2	
8. Mental diseases	M. 36 F. 27	....	....	....	....	....	....	....	....	2	1	4	3	3	3	3	2	4	5	3	3	2	1	....	....	....	
9. Diseases of the brain	M. 274 F. 197	65 50	44 23	8 11	6 10	6 10	131 100	11 17	15 12	11 6	12 6	4 2	3 5	6 3	8 11	4 4	7 5	12 4	7 8	11 8	12 2	1 3	1	....	....	4	



3. Bronchitis	M.	139	30	26	9	2	1	68	1	2	3	8	5	5	3	6	4	7	4	11	5	8	6	1	2			
	F.	135	30	26	1	4	2	60	5	3	8	5	5	5	3	6	4	2	4	3	6	7	10	4				
4. Pneumonia	M.	139	170	101	43	29	17	360	47	43	98	101	73	59	79	90	78	94	108	93	86	54	33	23	5	3	2	1
	F.	1129	130	76	45	29	7	278	49	28	45	70	58	41	67	58	44	54	62	76	68	49	36	17	9	4	2	5
5. Pleurisy	M.	21	1	1	1	1	1	1	1	1	1	2	1	1	1	2	1	1	1	3	1	3	1	2				
	F.	18	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	4	2	1			1	
6. Asthma	M.	31	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			1	
	F.	32	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			1	
7. Others of this group	M.	169	31	14	3	3	2	53	6	4	7	7	4	3	6	3	6	6	9	12	13	10	6	4	1			1
	F.	152	29	16	5	7	1	57	9	2	5	5	6	7	5	5	10	5	5	5	3	8	7	2			1	
V. DISEASES OF THE DIGESTIVE SYSTEM.																												
Total.																												
Males.																												
Females.																												
1. Dentition	M.	29	12	7	1	1	1	20																				
	F.	18	12	5	1	1	1	18																				
2. Angina	M.	17	6	2	1	1	2	9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	F.	26	7	3	1	3	2	16	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3. Gastritis	M.	17	2	3	1	1	1	5																				
	F.	31	5	1	1	1	1	8																				
4. Other diseases of the stomach	M.	112	21	8	3	2	1	35	8	1	1	2	7	7	4	3	7	3	3	12	6	4	5	1	1	1	1	2
	F.	111	18	4	1	2	3	28	9	2	6	8	9	1	5	6	2	2	6	7	11	4	2	1	1	1	1	1
5. Obstruction of the bowels	M.	24	2	1	1	1	1	2	2	3	3	1	1	2	1	1	1	1	1	1	1	2	2	1	1	1	1	1
	F.	17	2	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6. Hernia	M.	27	5	1	1	1	1	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	F.	11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7. Other diseases of the bowels	M.	51	17	4	2	1	1	21	2	3	2	4	2	5	1	1	1	1	1	1	1	2	3	3	1	1	1	1
	F.	29	6	2	1	1	1	8	1	3	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8. Jaundice	M.	29	6	1	1	1	1	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	F.	22	8	1	1	1	1	16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9. Inflammation and abscess of the liver	M.	35	3	1	1	1	1	4	3	1	2	2	4	3	1	2	3	2	3	2	3	1	2	1	2	1	1	1
	F.	33	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10. Other diseases of the liver	M.	83	6	2	1	1	1	10	1	5	1	1	1	2	3	9	7	13	7	10	4	7	2	1	1	1	1	1
	F.	61	11	1	3	2	1	18	1	1	1	1	3	1	1	1	2	3	9	4	4	1	1	1	1	1	1	1





VII.—DISEASES OF THE FEMALE  
ORGANS OF GENERATION.

[illegible]

VIII.—AFFECTIONS CONNECTED  
WITH PREGNANCY.

[illegible]

## IX.—DISEASES OF THE BONES AND JOINTS.

Total .....	152	30	22	6	8	8	74	11	16	7	7	6	2	4	5	5	3	1	4	2	2	1
Males.....	75	19	9	5	3	5	41	5	7	3	3	3	1	1	2	3	1	2	1	1	1	1
Females.....	77	11	13	1	5	3	33	6	9	4	5	3	1	3	3	2	2	1	2	1	2	1
1. Diseases of the spine.	M.	61	18	8	5	3	4	38	4	5	2	1	3	1	2	2	1	1	1	1	1	1
F.	70	11	13	1	5	3	33	6	7	3	3	3	1	2	2	2	1	2	1	2	1	2
2. Diseases of the bones....	M.	5	1	.....	.....	.....	1	.....	1	.....	1	.....	1	.....	1	.....	1	.....	1	.....	1	1
F.	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
3. Diseases of the hip-joint.	M.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
F.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
4. Others of this group.....	M.	9	..	1	.....	1	2	1	2	1	1	2	.....	1	1	.....	1	.....	1	.....	1	1
F.	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	



## XII.—ACCIDENTS AND INJURIES.

XII.—ACCIDENTS AND INJURIES.																										
Total		1044	101	38	34	30	26	229	61	80	101	103	81	61	51	39	38	47	39	32	18	14	20	12	3	15
Males.....		791	58	21	19	14	17	129	35	68	84	86	67	52	43	34	31	39	36	28	14	12	12	4	3	14
Females.....		253	43	17	15	16	9	100	26	12	17	17	14	9	8	5	4	8	3	4	4	2	8	8	3	1
1. Burns and scalds.....		M. F.	44 75	8 10	7 6	4 12	4 4	31 40	2 9	2 8	2 1	2 5	1 6	3 2	1 1	1	1	1	1	1	1	2	1	1	1	1
2. Drowned.....		M. F.	73 25	4 3	5 3	4 2	4 1	17 9	4 5	14 5	11 5	9 5	3 1	5 1	2 1	3 1	1 1	1 1	1 1	1	1	1	1	1	1	1
3. Exposure and neglect.....		M. F.	11 11	6 9	1	1	1	7 9	7	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1
4. Gunshot wounds.....		M. F.	67 7	1 1	1 2	1 3	3 2	3 2	2 2	6 2	11 2	15 1	9 3	7 2	6 3	1 1	1 2	1	1	1	1	1	1	1	1	1
5. Homicide.....		M. F.	19 2	1 1	1	1	1	1	1	1	1	1	3 3	2 2	2 3	2 3	1 1	1	1	2	2	2	2	2	2	2
6. Infanticide.....		M. F.	1 1	1 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7. Injuries by machinery.....		M. F.	1 1	1 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8. Railroad accidents.....		M. F.	1 1	1 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9. Suffocation.....		M. F.	40 18	24 15	2 1	1	27 15	2 1	2 1	1 1	1 1	1 1	1 1	3 3	3 1	1	1	1	1	1	1	1	1	1	1	1
10. Suicide by shooting.....		M. F.	8 1	1 1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2
11. Suicide by drowning.....		M. F.	2 3	1 1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1
12. Suicide by poison.....		M. F.	2 3	1 1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13. Other suicides.....		M. F.	42 13	1 1	1 1	1 1	1 1	1 1	1 1	1 1	2 5	4 3	2 1	3 1	2 1	2 1	1 1	4 1	9 1	4 1	1 1	1 1	2 1	1 1	1 1	5
14. Sunstroke.....		M. F.	12 2	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	2 1	1 1	1 1	1 1	2 1	1 1	1 1	1	1	3	1	1	1	1
15. Surgical operations.....		M. F.	5 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1	1	1	1	1	1	1









[illegible]

*General Diseases.—B.*

Total.....	382	211	14	5	....	1	230	..	2	1	3	4	9	7	3	5	3	..	3	1	1	1	1
Males.....	163	119	7	2	....	..	128	..	1	..	1	4	8	6	3	2	1	..	3	1	1	..	..
Females.....	119	92	7	3	....	1	163	..	1	1	2	..	1	1	..	3	2	..	..	..	..	..	..
1. Worms.....	M. F.	1	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Other parasitic diseases.....	M. F.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Alcoholism.....	M. F.	20 6	..	..	..	..	..	..	..	2	..	6	1	1	..	2	1	..	2	1	1	..	..
4. Lead poison.....	M. F.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5. Other poisons.....	M. F.	9 2	..	1	..	..	1	..	1	..	4	2	1	..	..	1	..	..	..	..	..	..	..
6. Inanition.....	M. F.	133 111	119 92	6 7	3	....	126 163	..	1	1	..	..	..	..	..	..	2	..	1	..	1	..	..

General Diseases—(1)

[illegible]

TABLE IV.—Deaths in Chicago—Continued.

Causes of Death.	Total.....		Under 1....		1.	2.	3.	4.	Total under 5.....	5 to 10....	10 to 15....	15 to 20....	20 to 25....	25 to 30....	30 to 35....	35 to 40....	40 to 45....	45 to 50....	50 to 55....	55 to 60....	60 to 65....	65 to 70....	70 to 75....	75 to 80....	80 to 85....	85 to 90....	90 to 95....	95 and over	Unknown..		
	M.	F.	M.	F.																											
5. Old age.....	57	82																			4	7	11	19	9	4	3				
																					5	14	19	21	7	9	6				
6. Atrophy.....	4	8	3	3	1												1					1									
<i>General Diseases—D.</i>																															
Total.....	1293	99	44	26	12	12	12	12	193	34	17	68	144	131	111	118	102	97	68	68	45	40	26	13	5	5			8		
Males.....	660	62	24	10	7	6	6	6	109	14	6	23	70	68	61	61	50	47	43	37	25	19	13	3	4	2			5		
Females.....	633	37	20	16	5	6	6	6	84	20	11	45	74	63	50	57	52	50	25	31	20	21	13	10	1	3			3		
1. Rheumatism.....	17								1	4		3	3	1	1					2	1		1					1			
	11															3	1	1	1	1											
2. Scrofula and tabes.....	16	10	2	2					15	1										1											
	12	4	1	1					6	2	1		2																		
3. Leprosy.....																															
4. Consumption.....	437	12	8						22	5	3	18	68	62	53	53	28	31	30	23	13	9	3	1	2			3			
	406	10	11	5	1	3			30	7	8	41	69	57	44	43	31	24	9	14	8	10	5	2		1		3			
5. Hydrocephalus.....	58	32	11	7	3	1			54	2				1	1																
	42	15	7	7	4	1			34	6	1																				
6. Cancer.....	66		1						2					1	2	5	3	7	10	5	7	7	1	1							
	102	1							2			1	2	2	2	7	17	21	13	11	9	9	4	2	1	1					
7. Tumor.....	8	1	1						2	1				1	1	1		2		1											
	6	1							1					2	1					1	1										
8. Anemia.....																															
	6	1							2					1		1		1													
9. Dropsy.....	44	5							8	1	3	2	1	1	1	2	3	3	7	1	6	2	1			1		1			
	40	4	1	1					8	4				1	1	2	3	4		3	2	2	3	4							













[illegible]

VIII.—AFFECTIONS CONNECTED  
WITH PREGNANCY.

[illegible]

IX.—DISEASES OF THE BONES AND JOINTS.

Total	12	1	1	1	2	3	4
Males	6					3	2
Females	6	1	1		2	2	2
1. Diseases of the spine	3					1	1
M.	3					1	1
F.	4	1	1		2	2	
2. Diseases of the bones	2					1	1
M.	2					1	1
F.							
3. Diseases of the hip-joint	1					1	
M.	1					1	
F.	1						
4. Others of this group	1						1
M.	1						1
F.							

X. DISEASES OF THE SKIN AND  
CELLULAR TISSUE.



[illegible]

TABLE V.—*Deaths in Illinois, compared with the Total Deaths in the United States, with Distinction of Sex, in each of the Three Census Years: 1880, 1870, 1860.*

Region.	Population....	DEATHS.			Deaths per thousand of population..
		Total....	Males....	Females..	
United States in 1880 .....	50,155,783	756,893	391,960	364,933	15.09
Illinois in 1880 .....	3,077,871	45,017	23,698	21,319	14.63
United States in 1870 .....	38,558,371	492,263	260,673	231,590	12.77
Illinois in 1870 .....	2,539,891	33,672	18,141	15,531	13.26
United States in 1860 .....	31,443,321	394,153	207,943	186,210	12.54
Illinois in 1860 .....	1,711,951	19,300	10,368	8,932	11.27

TABLE VI.—*Deaths in Illinois, compared with Total Deaths in the United States, with Distinction of Sex and Color: 1880.*

Region.	MALE.			FEMALE.			TOTAL.		
	Population	Deaths.....	Rate per thousand.	Population	Deaths.....	Rate per thousand.	Population	Deaths.....	Rate per thousand.
United States.....	W. 22,130,900	333,735	15.08	21,272,070	306,456	14.41	50,155,783	756,893	15.09
	C. 3,387,920	58,225	17.19	3,364,893	58,477	17.38			
Illinois.....	W. 1,561,726	23,267	14.90	1,469,425	20,918	14.24	3,077,871	45,017	14.63
	C. 24,797	431	17.38	21,923	401	18.29			





TABLE VIII.—*Deaths in each Thousand of Population in the Three Groups of Counties\* in Illinois, 1880.*

Race.	Region of the Lakes. No. 1.	Mississippi River Belt. No. 2.	Prairie Region. No. 3.
White .....	18.20	15.06	13.23
Colored .....	16.84	19.01	16.56

\*For the Counties composing each Group, see page 549.

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METEOROLOGICAL TABLES.

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# METEOROLOGICAL TABLES.

In the Fourth Annual Report the following data were given for Cairo from 1871 to 1881, inclusive; for Chicago for the same period; for Dubuque, Ia., from 1873 to 1881, inclusive; for Indianapolis, Ind., from 1871 to 1881, inclusive; for Keokuk, Ia., for the same period; for Louisville, Ky., for the same period; for St. Louis, for the same period; and for Springfield, from 1879 to 1881, inclusive—these covering the observations made at each station from the date of its establishment up to 1881. The same data for 1882 are compiled from the official records on file in the Signal Office of the War Department, at Washington, D. C., and are furnished, at the request of the Secretary, through the courtesy of Brevet Major-General W. B. Hazen, Chief Signal Officer of the Army.

*STATEMENT showing the mean monthly barometer, reduced to sea level; temperature; relative humidity; total amount of precipitation in inches and hundredths; the prevailing direction of wind and the total movement in miles; at the Stations of the Signal Service named below, for the year 1882.*

## MEAN BAROMETER—REDUCED TO SEA LEVEL.

Stations.	Jan.	Feb.	Mar.	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Cairo, Ill. ....	30.219	30.144	30.145	30.019	30.009	29.982	30.070	30.034	30.115	30.060	30.223	30.202
Chicago, Ill. ....	30.140	30.046	30.056	30.043	29.972	29.875	30.004	29.974	30.062	30.014	30.149	30.114
Dubuque, Iowa. ....	30.160	30.034	30.060	30.027	29.968	29.874	29.999	29.992	30.078	29.990	30.157	30.135
Indianapolis, Ind. ....	30.149	30.091	30.078	30.017	29.945	29.897	30.002	29.971	30.057	30.024	30.167	30.142
*Keokuk, Iowa. ....	30.160	30.058	30.059	29.983	29.939	29.876	29.994	29.968	30.058	29.988	30.165	30.145
*Louisville, Ky. ....	30.162	30.097	30.088	30.004	29.943	29.919	30.017	29.983	30.049	30.029	30.162	30.150
St. Louis, Mo. ....	30.205	30.111	30.097	30.010	29.971	29.936	30.039	30.005	30.088	30.029	30.202	30.180
Springfield, Ill. ....	30.190	30.097	30.095	30.024	29.961	29.915	30.030	29.996	30.081	30.026	30.185	30.154

\*For 30 days only, in October. \*For 30 days only, in May.

## MEAN TEMPERATURE.

Stations.	Jan.	Feb.	Mar.	Apr.	May	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Cairo, Ill. ....	38.5	49.	51.9	60.5	63.8	76.2	75.8	75.1	68.9	61.7	48.9	37.6
Chicago, Ill. ....	28.3	38.2	38.3	45.9	51.7	63.6	68.6	71.2	65.	56.5	41.7	26.
Dubuque, Iowa. ....	24.1	35.7	37.	48.5	54.4	67.2	69.	71.6	62.6	55.3	39.2	23.4
Indianapolis, Ind. ....	31.6	42.2	44.8	53.2	58.5	71.6	72.6	73.	65.5	58.8	43.3	30.4
*Keokuk, Iowa. ....	28.1	39.5	41.7	53.7	56.8	71.1	72.4	73.4	66.1	58.6	42.3	27.7
*Louisville, Ky. ....	38.3	47.9	50.	57.3	62.5	73.4	74.4	74.4	68.	63.2	47.6	37.3
St. Louis, Mo. ....	32.1	43.9	47.1	57.6	59.5	73.4	73.8	74.	68.3	61.	44.6	32.3
Springfield, Ill. ....	31.7	42.2	44.3	55.2	57.9	71.4	72.2	72.6	65.4	58.9	43.9	30.7

\*For 29 days only, in October. \*For 30 days only, in May.

## TOTAL PRECIPITATION OR RAINFALL—INCHES.

Stations.	Jan.	Feb.	Mar.	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Cairo, Ill .....	6.35	10.14	4.22	4.14	10.22	3.34	5.25	3.46	3.28	2.57	5.96	2.65
Chicago, Ill .....	1.55	2.24	3.43	6.72	5.52	5.71	3.43	4.96	0.91	3.40	1.48	1.99
Dubuque, Iowa .....	0.84	0.59	1.49	4.47	4.16	6.29	1.48	2.29	2.60	5.29	1.55	1.79
Indianapolis, Ind.....	3.74	7.28	6.11	3.68	7.65	9.35	3.43	4.51	0.72	2.18	2.59	2.55
*Keokuk, Iowa .....	1.07	1.54	3.30	3.22	7.11	9.45	4.53	3.09	1.52	2.71	2.25	1.73
†Louisville, Ky .....	6.29	9.69	5.85	2.17	7.46	5.23	4.57	5.45	3.57	1.56	2.76	1.91
St. Louis, Mo .....	2.80	8.94	3.49	3.58	4.55	4.53	3.84	2.20	1.73	2.44	3.24	1.85
Springfield, Ill.....	2.48	7.92	4.92	3.85	10.59	12.71	1.89	3.13	1.21	3.76	2.60	3.19

\*For 29 days only, in October. †For 30 days only, in May.

## MEAN RELATIVE HUMIDITY.

Stations.	Jan.	Feb.	Mar.	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Cairo, Ill .....	82.5	75.6	69.8	65.9	71.9	73.8	74.6	78.6	78.5	76.2	74.4	75.3
Chicago, Ill .....	83.2	77.	80.1	72.3	71.4	77.3	68.4	77.3	71.1	76.4	75.8	74.6
Dubuque, Iowa .....	67.6	63.4	66.5	59.9	64.	69.3	66.8	72.3	74.1	72.5	72.3	65.7
Indianapolis, Ind.....	76.7	71.9	67.	63.4	66.	69.4	67.7	77.3	74.8	73.6	71.4	74.2
*Keokuk, Iowa .....	78.2	69.5	68.2	66.1	72.5	74.1	68.5	72.9	69.7	72.3	74.3	76.1
†Louisville, Ky .....	76.5	68.8	62.8	58.8	66.7	71.2	69.2	75.9	75.1	74.8	69.1	64.8
St. Louis, Mo .....	79.1	73.9	69.1	69.4	83.5	82.	78.4	88.	76.9	84.6	90.3	85.4
Springfield, Ill.....	73.1	66.7	61.9	60.1	68.6	72.6	65.6	73.9	68.5	71.4	68.9	68.9

\*For 29 days only, in October. †For 30 days only, in May.

## PREVAILING WINDS.

Stations.	Jan.	Feb.	Mar.	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Cairo, Ill .....	NE&E	S.	S.	S.	N.	SW.	SW.	SW.	NE.	SW.	N.	N.
Chicago, Ill .....	W.	W.	W.	NE.	N.	SW.	SW.	NE.	NE.	S.	W.	W.
Dubuque, Iowa .....	S.	S.	NW.	E.	S.	E.	S.	NW.	SE&S	S.	NW.	NW.
Indianapolis, Ind.....	NW.	SE.	NW.	N.	SE&N	SW.	SW.	SW.	N.	SE.	NE.	NW.
*Keokuk, Iowa .....	S-NW	SW.	NW.	E.	SE.	SW.	S.	N.	E.	SE.	W.	WNW
†Louisville, Ky .....	W.	S.	S.	N.	S.	S.	S.	SW.	N.	S.	W.	W.
St. Louis, Mo .....	NW.	S.	NW.	S.	S.	S.	S.	S.	N.	S.	S.	NW.
Springfield, Ill.....	S.	S.	NW.	NE.	S.	SW.	S.	NW.	NE.	S.	NW.	NW.

\*For 29 days only, in October. †For 30 days only, in May.

## TOTAL MOVEMENT OF WIND—MILES.

Stations.	Jan.	Feb.	Mar.	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Cairo, Ill .....	6,446	6,676	7,797	6,481	6,015	4,581	4,296	3,742	4,498	4,744	5,882	6,276
Chicago, Ill .....	6,926	6,625	7,773	7,275	7,232	5,916	5,573	4,997	5,695	5,733	6,095	6,577
Dubuque, Iowa .....	3,798	4,246	5,357	4,786	5,190	3,990	3,693	3,190	2,316	2,676	3,109	2,917
Indianapolis, Ind.....	4,863	4,651	5,734	4,896	4,148	3,787	3,183	2,985	3,396	3,043	3,623	4,830
*Keokuk, Iowa .....	6,457	5,492	6,214	5,636	6,044	5,100	3,839	3,359	3,151	3,769	2,898	5,237
†Louisville, Ky .....	6,276	6,618	8,128	6,036	5,269	5,568	4,333	4,026	3,482	4,382	5,605	6,167
St. Louis, Mo .....	7,680	7,893	8,950	7,817	7,924	7,207	6,169	5,476	6,164	6,474	7,281	7,830
Springfield, Ill.....	6,602	6,890	8,157	6,659	6,553	4,963	4,218	3,769	4,628	5,420	5,926	6,659

\*For 29 days only, in October. †For 30 days only, in May, and 20 in September.

## ERRATA.

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Page 223, Table II, "Both before and after exposure," total should be 68, instead of "64."

*Ibid*, third line from foot of page, "9.42 per cent. recovered," should read 34.42 per cent. recovered.

Page 240, "Details of Local Outbreaks of Small-Pox 1882-83," read 1880-83.

Page 277, Madison county, Alton—of the two cases in December, 1883, the first died on the sixteenth day, of unmodified small-pox; and the nurse, on the sixth day, of purpura variolosa.

Pages 396-7, 406-7, 416-17, the dates in captions to Tables III-VIII, incl., "Vaccinal Status—Public Scholars," should read: Prior to December 1, 1881—Subsequent to December 1, 1881.





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